

# TOSHIBA

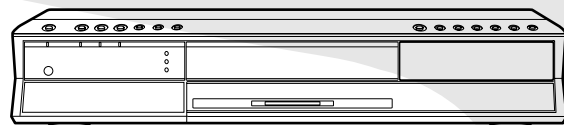
FILE NO. 810-200423

## SERVICE MANUAL



## HDD/DVD VIDEO RECORDER

***RD-XS32SB***  
***RD-XS32SF***  
***RD-XS32SG***



## LASER BEAM CAUTION LABEL



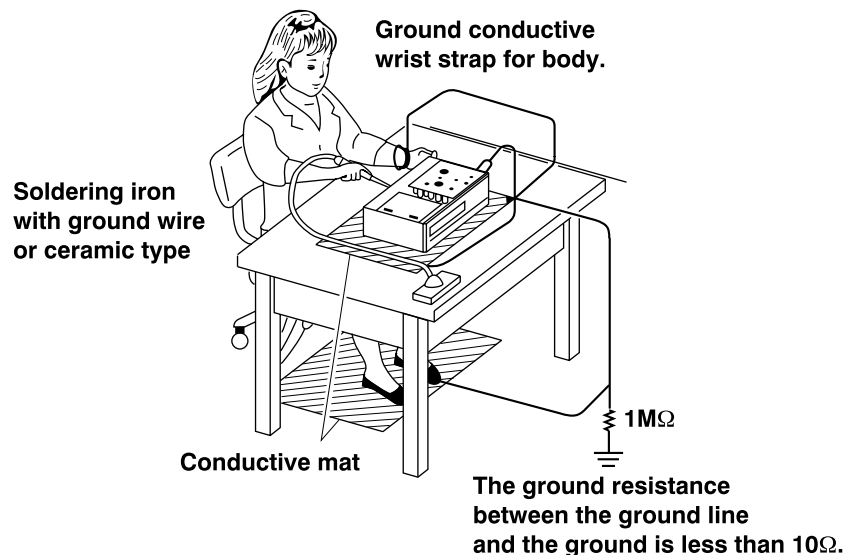
When the power supply is being turned on, you may not remove this laser cautions label. If it removes, radiation of a laser may be received.

## PREPARATION OF SERVICING

Pickup Head consists of a laser diode that is very susceptible to external static electricity.

Although it operates properly after replacement, if it was subject to electrostatic discharge during replacement, its life might be shortened. When replacing, use a conductive mat, soldering iron with ground wire, etc. to protect the laser diode from damage by static electricity.

And also, the LSI and IC are same as above.



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# SECTION 1 GENERAL DESCRIPTIONS

## 1. OPERATING INSTRUCTIONS

Please refer to the owner's manual about the contents.



## 2. LOCATION OF MAIN PARTS

### 2-1. Location of Main Parts

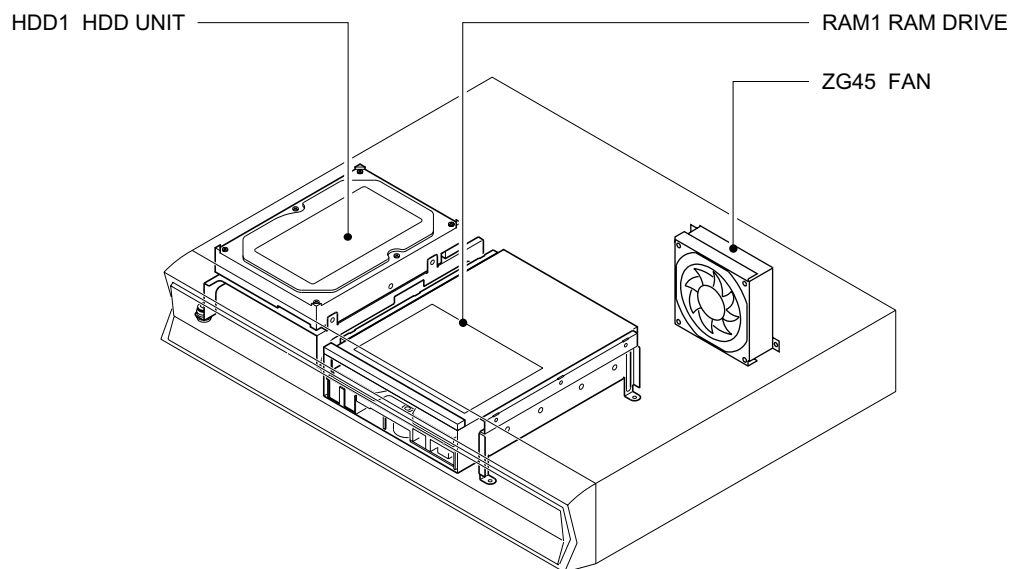


Fig. 1-2-1

### 2-2. Location of PC Boards

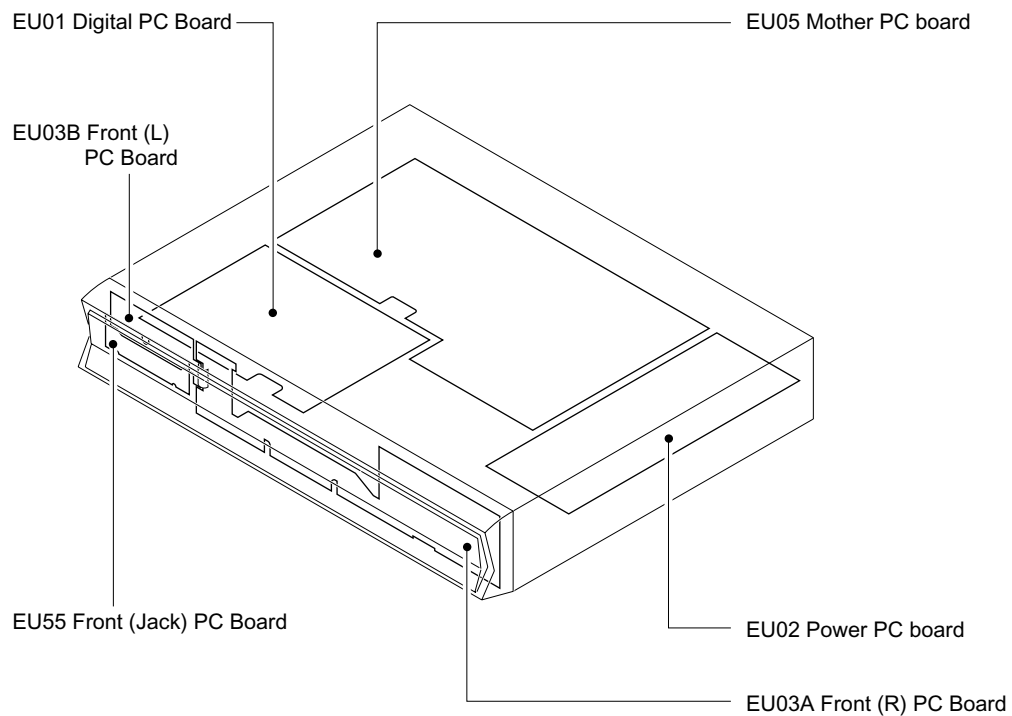


Fig. 1-2-2

# SECTION 2

## PART REPLACEMENT AND ADJUSTMENT PROCEDURES

### CAUTIONS BEFORE STARTING PART REPLACEMENT

Electronic parts are susceptible to static electricity and may easily damaged, so do not forget to ground as required. Many screws are used inside the unit. To prevent the screws from missing or dropping, etc. always use a magnetized screwdriver in servicing. Several kinds of screws are used and some of them need special cautions. That is, take care of the tapping screws securing molded parts and fine pitch screws used to secure metal parts. If they are used improperly, the screw holes will be easily damaged and the parts can not be fixed.

## 1. REPLACEMENT OF MECHANICAL PARTS

### 1-1. Cabinet Replacement

#### 1-1-1. Top Cover

1. Remove seven screws (1), then remove the top cover (2).

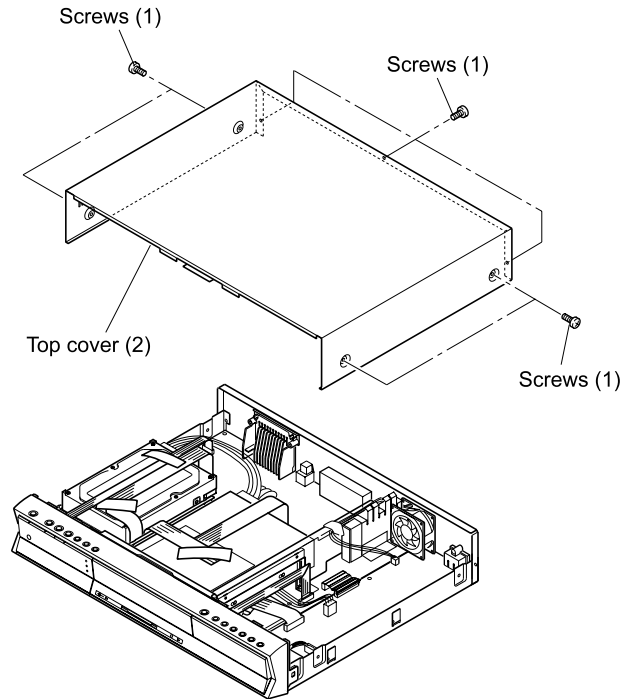
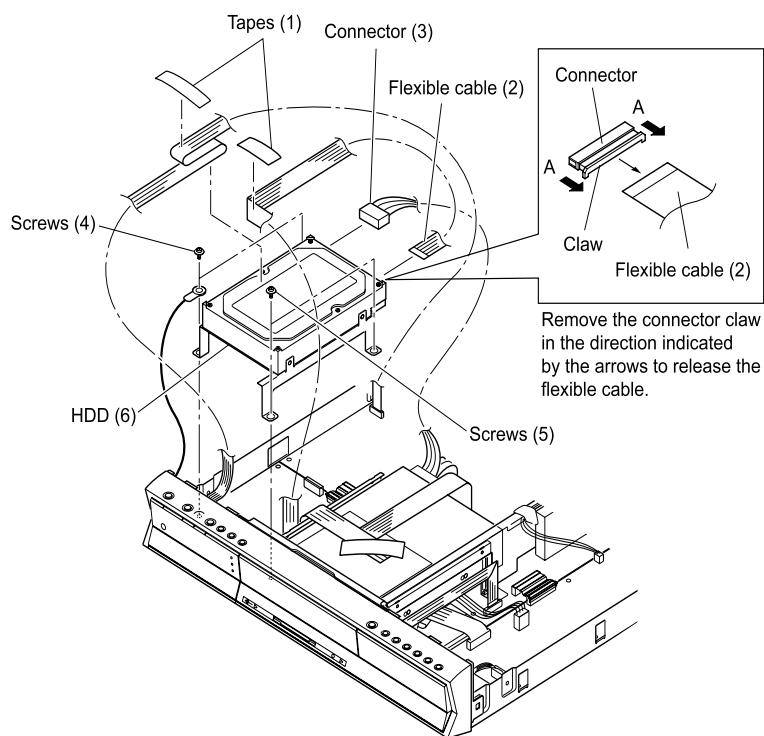


Fig. 2-1-1

### 1-1-2. HDD

1. Peel off two tapes (1).
2. Disconnect the flexible cable (2).
3. Disconnect the connector (3).
4. Remove two screws (4) and two screws (5), then remove the HDD (6).



**Fig. 2-1-2**

### 1-1-3. Front Panel

1. Remove the top cover. (Refer to item 1-1-1.)
2. Remove the HDD. (Refer to item 1-1-2.)
3. Disconnect the flexible cable (1).
4. Disconnect the flexible cable (2) and two connectors (3).
5. Remove two screws (4).
6. Release four claws, then remove the front panel (5).

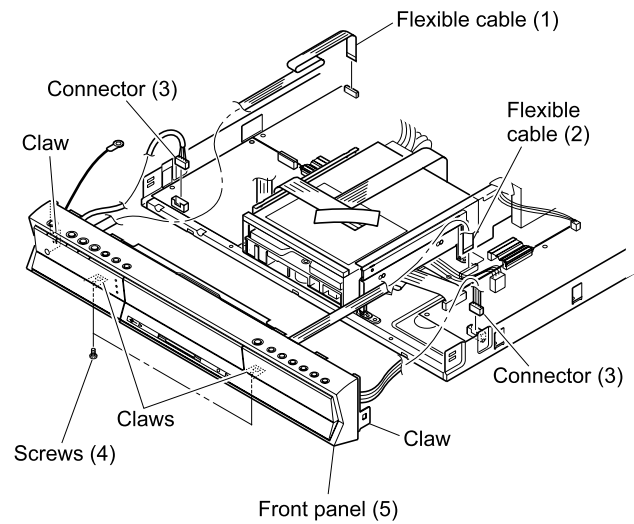


Fig. 2-1-3

### 1-1-4. Tray Door

1. Remove the front (R) PC board and front (L) PC board. (Refer to item 1-2-4.)
2. Remove a spring (1).
3. Remove the tray door (2) while slightly bending it.

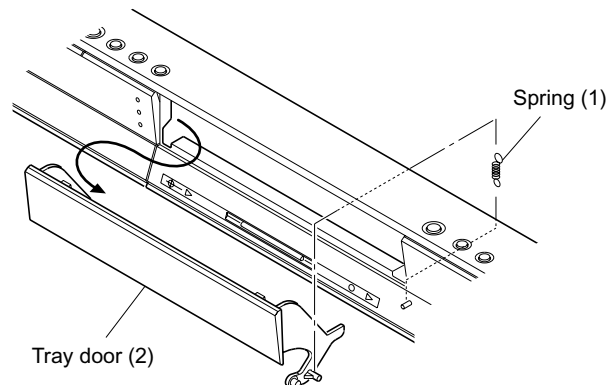


Fig. 2-1-4

### 1-1-5. Operation Panel Door

1. Open the operation panel door (1).
2. Release two claws and unhinge the door (1).

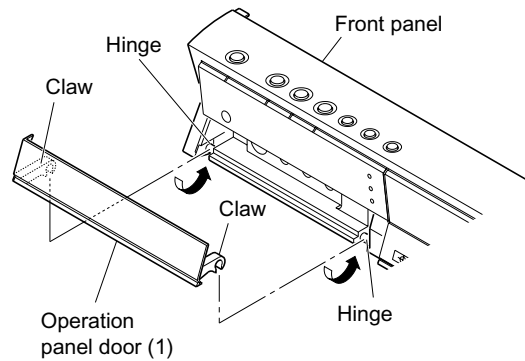


Fig. 2-1-5

### 1-1-6. RAM Drive

1. Remove the HDD. (Refer to item 1-1-2.)
2. Peel off the tape (1).
3. Disconnect the flexible cables (2).
4. Disconnect the connector (3).
5. Remove two screws (4) and acrylic board (5).
6. Remove four screws (6), then remove the RAM drive (7).

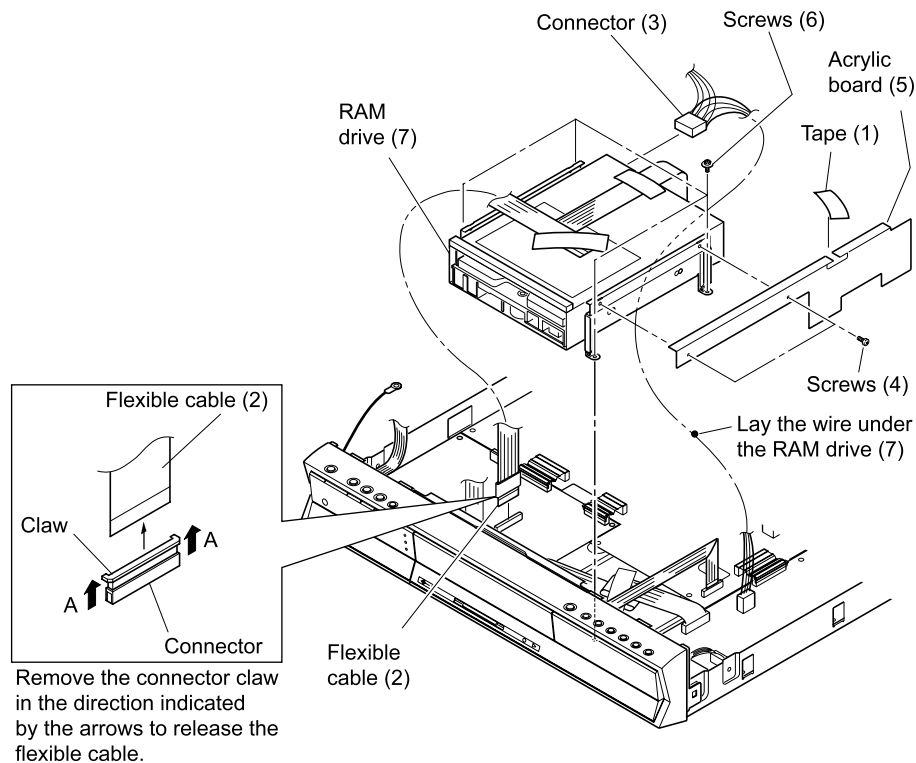


Fig. 2-1-6

### 1-1-7. Fan

1. Peel off the tape (1).
2. Disconnect the connector (2).
3. Remove four screws (3) and the fan (4).

#### Note:

- After replacing the fan (4), attach the tape (1) as it was.

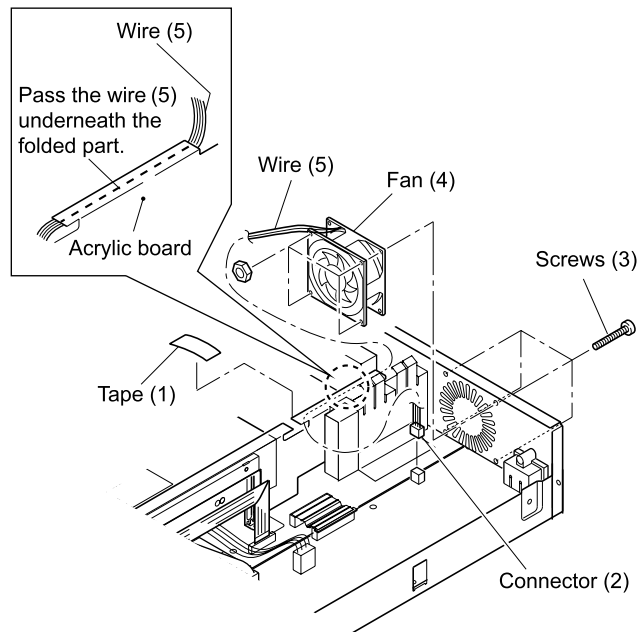


Fig. 2-1-7

### 1-1-8. Rear Panel

1. Remove twelve screws (1), then remove the rear panel (2).

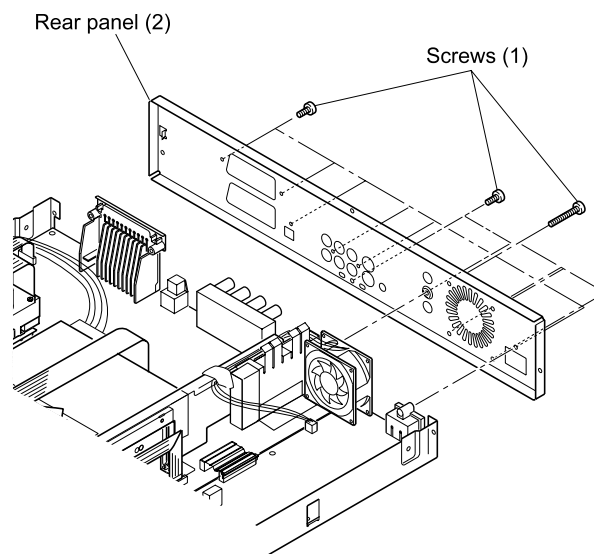


Fig. 2-1-8

## 1-2. PC Board Replacement

### 1-2-1. Digital PC Board

1. Remove the HDD. (Refer to item 1-1-2.)
2. Remove the RAM drive. (Refer to item 1-1-6.)
3. Disconnect two connectors (1).
4. Peel off the tape (2), then disconnect two connectors (3).
5. Disconnect two flexible cables (4).
6. Remove three screws (5) and the digital PC board (6).

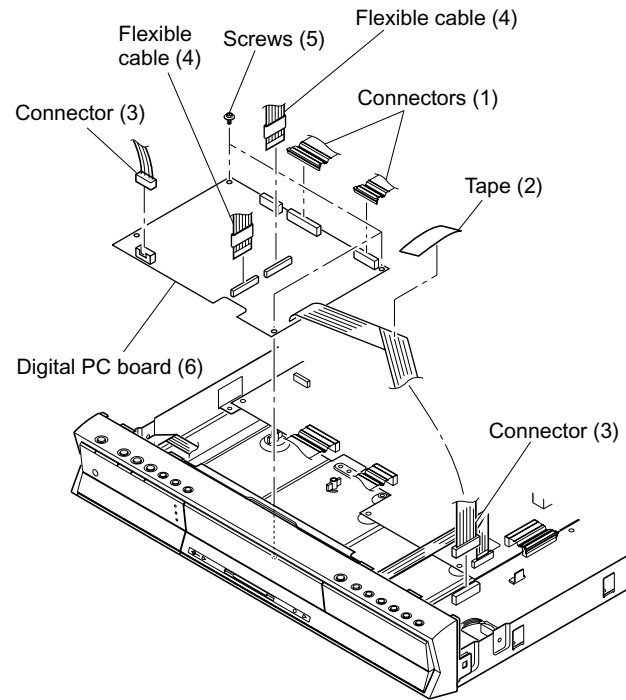


Fig. 2-1-9

### 1-2-2. Mother PC Board

1. Remove the HDD. (Refer to item 1-1-2.)
2. Remove the RAM drive. (Refer to item 1-1-6.)
3. Remove the rear panel. (Refer to item 1-1-8.)
4. Disconnect three connectors (1).
4. Disconnect the flexible cable (2).
5. Remove three screws (3), then remove the mother PC board (4).

#### Note:

- When mounting the tuner, confirm that the insulation tape (cotton) is attached under the copper foil.

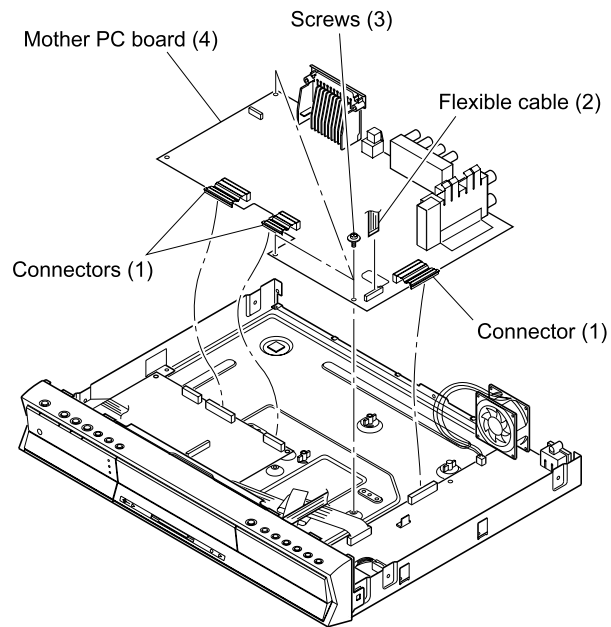


Fig. 2-1-10

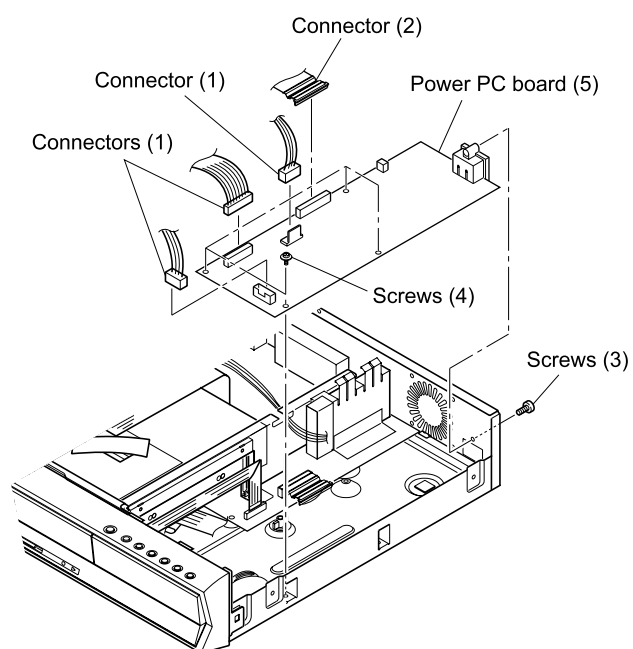


### 1-2-3. Power PC Board

#### Cautions :

- **Danger of explosion if battery is incorrectly replaced.**
- **Replace only with the same or equivalent type.**

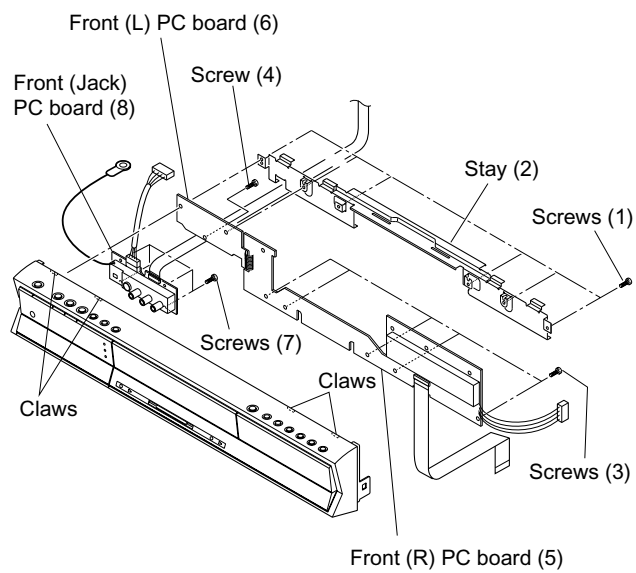
1. Disconnect three connectors (1).
2. Disconnect the connector (2).
3. Remove the screw (3), four screws (4) and the power PC board (5).



**Fig. 2-1-11**

#### 1-2-4. Front (R), Front (L), Front (Jack) PC Board

1. Remove the front panel. (Refer to item 1-1-3.)
2. Remove six screws (1), then remove the stay (2).
3. Remove five screws (3) and the screw (4), then remove the front (R) PC board (5) and front (L) PC board (6).
4. Remove four screws (7), then remove the front (Jack) PC board (8).



**Fig. 2-1-12**

# SECTION 3

## SERVICING DIAGRAMS

### 1. CIRCUIT SYMBOLS AND SUPPLEMENTARY EXPLANATION

#### 1-1. Precautions for Part Replacement

- In the schematic diagram, parts marked  $\triangle$  (ex.  $\triangle$  F801) are critical part to meet the safety regulations, so always use the parts bearing specified part codes (SN) when replacing them.
- Using the parts other than those specified shall violate the regulations, and may cause troubles such as operation failures, fire etc.

#### 1-2. Solid Resistor Indication

<b>Unit</b>	None ..... $\Omega$ K ..... $k\Omega$ M ..... $M\Omega$
<b>Tolerance</b>	None ..... $\pm 5\%$ B ..... $\pm 0.1\%$ C ..... $\pm 0.25\%$ D ..... $\pm 0.5\%$ F ..... $\pm 1\%$ G ..... $\pm 2\%$ K ..... $\pm 10\%$ M ..... $\pm 20\%$
<b>Rated Wattage</b>	(1) Chip Parts None ..... 1/16W (2) Other Parts None ..... 1/6W Other than above, described in the Circuit Diagram.
<b>Type</b>	None ..... Carbon film S ..... Solid R ..... Oxide metal film M ..... Metal film W ..... Cement FR ..... Fusible

Eg. 1

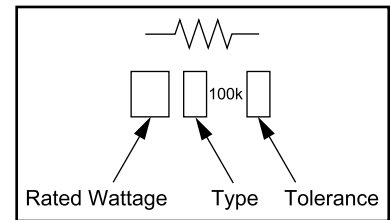


Fig. 3-1-1

#### 1-3. Capacitance Indication

<b>Symbol</b>	$\begin{array}{l} \text{---} \text{  } \text{---} \text{+} \\ \text{---} \text{  } \text{---} \text{NP} \\ \text{---} \text{  } \text{---} \text{M} \\ \text{---} \text{  } \text{---} \text{F} \\ \text{---} \text{  } \text{---} \text{A} \end{array}$ ..... Electrolytic, Special electrolytic ..... Non polarity electrolytic ..... Ceramic, plastic ..... Film ..... Trimmer
<b>Unit</b>	None ..... F $\mu$ ..... $\mu F$ p ..... pF
<b>Rated voltage</b>	None ..... 50V For other than 50V and electrolytic capacitors, described in the Circuit Diagram.
<b>Tolerance</b>	(1) Ceramic, plastic, and film capacitors of which capacitance are more than 10 pF. None ..... $\pm 5\%$ or more B ..... $\pm 0.1\%$ C ..... $\pm 0.25\%$ D ..... $\pm 0.5\%$ F ..... $\pm 1\%$ G ..... $\pm 2\%$ (2) Ceramic, plastic, and film capacitors of which capacitance are 10 pF or less. None ..... more than $\pm 5$ pF B ..... $\pm 0.1$ pF C ..... $\pm 0.25$ pF (3) Electrolytic, Trimmer Tolerance is not described.
<b>Temperature characteristic (Ceramic capacitor)</b>	None ..... SL For others, temperature characteristics are described. (For capacitors of $0.01 \mu F$ and no indications are described as F.)
<b>Static electricity capacity (Ceramic capacitor)</b>	Sometimes described with abbreviated letters as shown in Eg. 3.

Eg. 2

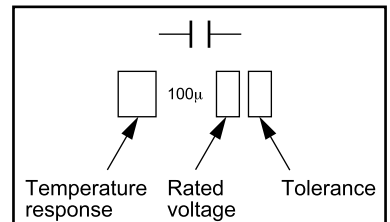


Fig. 3-1-2

Eg. 3

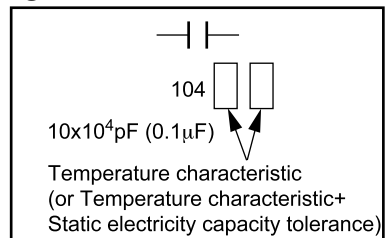


Fig. 3-1-3

1-4. Inductor Indication

Unit	None ..... H
	μ ..... μH
	m ..... mH
Tolerance	None ..... ±5%
	B ..... ±0.1%
	C ..... ±0.25%
	D ..... ±0.5%
	F ..... ±1%
	G ..... ±2%
	K ..... ±10%
	M ..... ±20%

Eg. 4

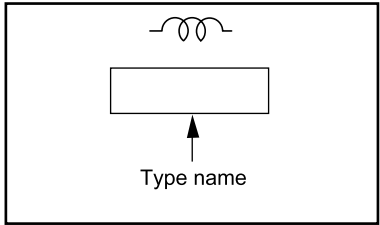


Fig. 3-1-4

1-5. Waveform and Voltage Measurement

- The waveforms for CD/DVD and RF shown in the circuit diagrams are obtained when a test disc is played back.
- All voltage values except the waveforms are expressed in DC and measured by a digital voltmeter.

1-6. Others

- The parts indicated with "NC" or "KETU" etc. are not used in the circuits of this model.

Eg. 5

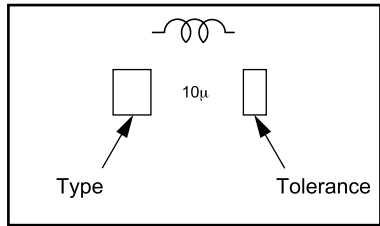


Fig. 3-1-5



3. BLOCK DIAGRAMS

3-1. Overall Block Diagram

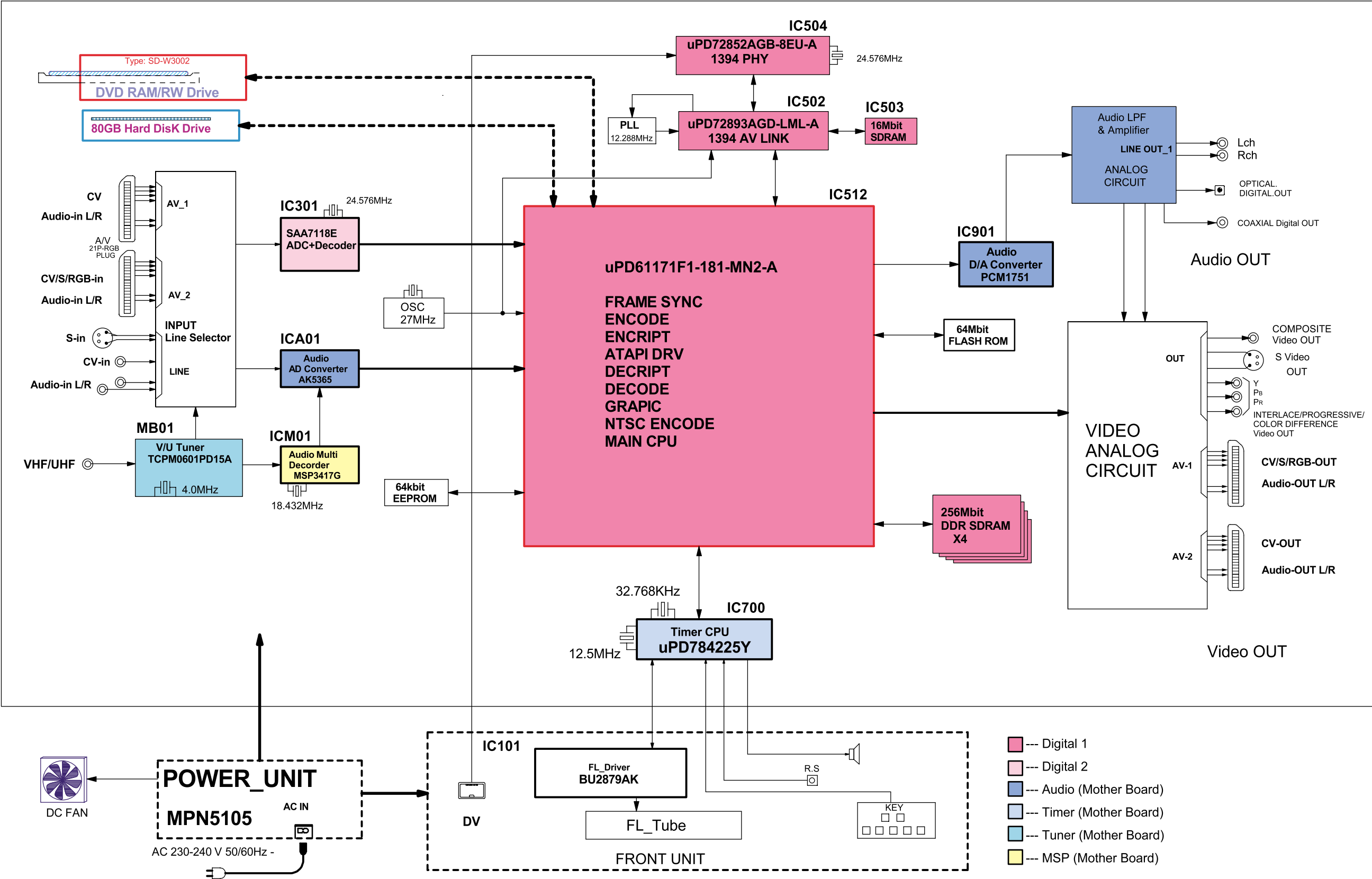


Fig. 3-3-1

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# 4. CIRCUIT DIAGRAMS

## 4-1. Power Supply Circuit Diagram

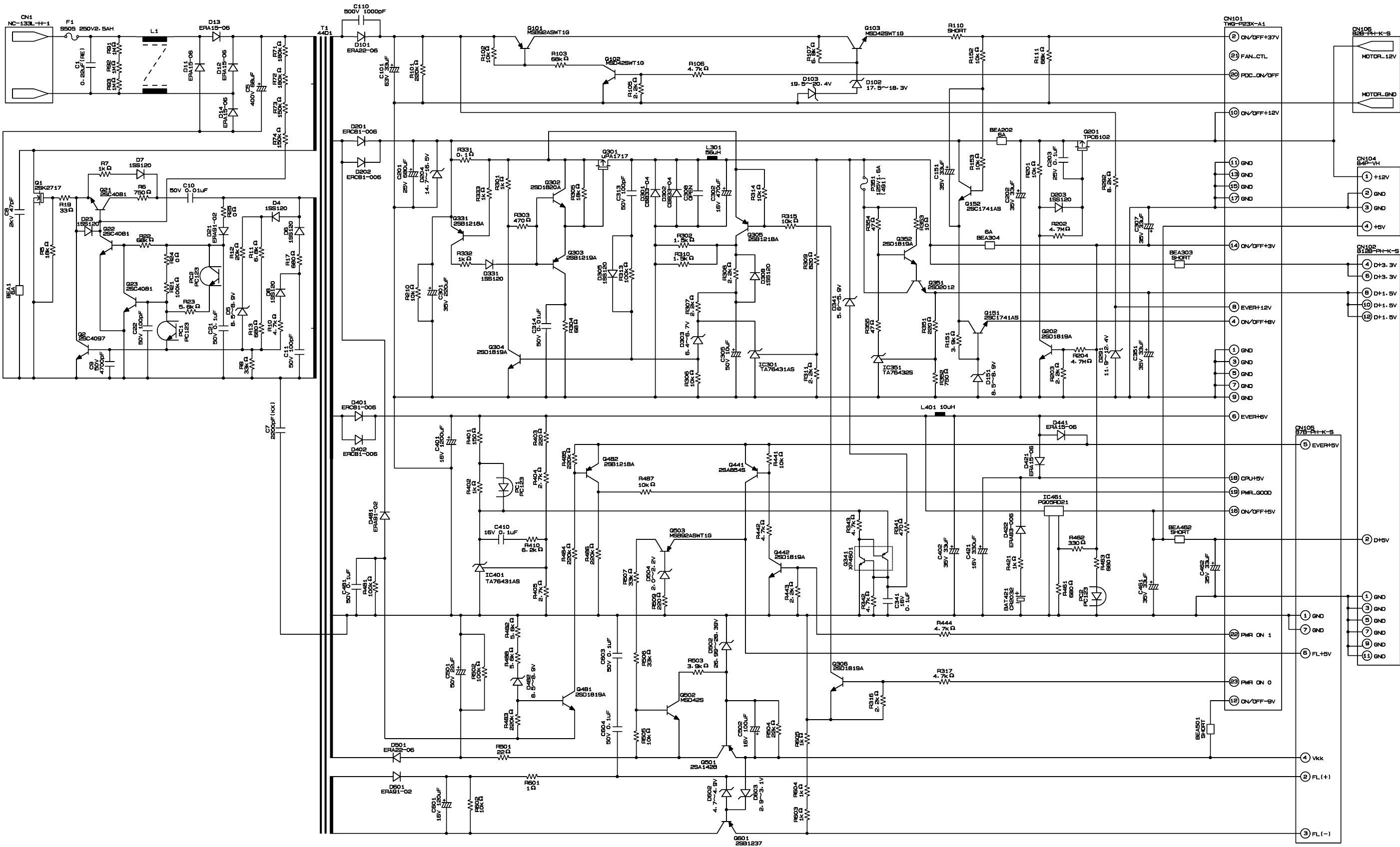


Fig. 3-4-1

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## 4-2. Front Circuit Diagram

### 4-2-1. Front Jack Circuit Diagram

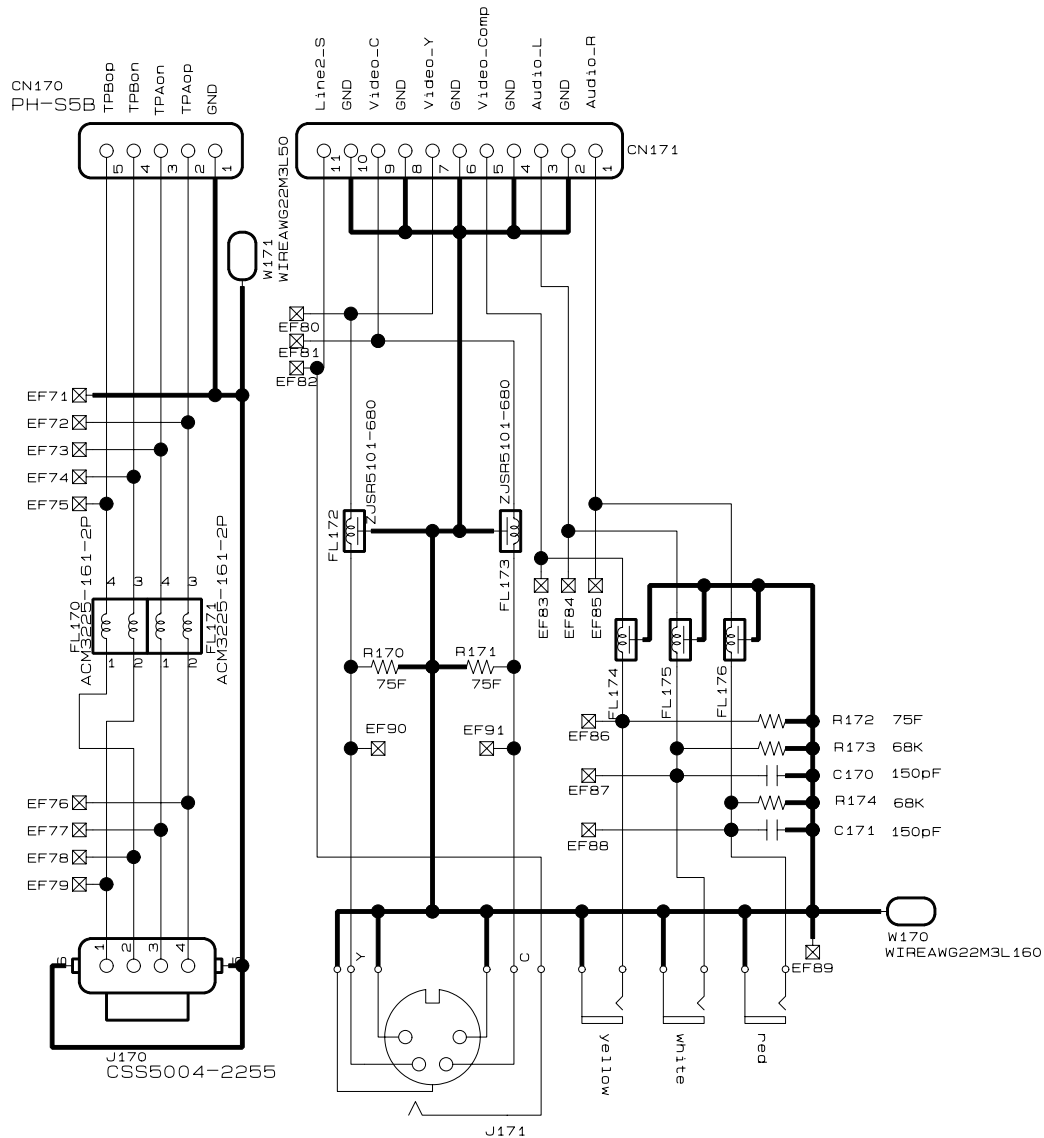


Fig. 3-4-2



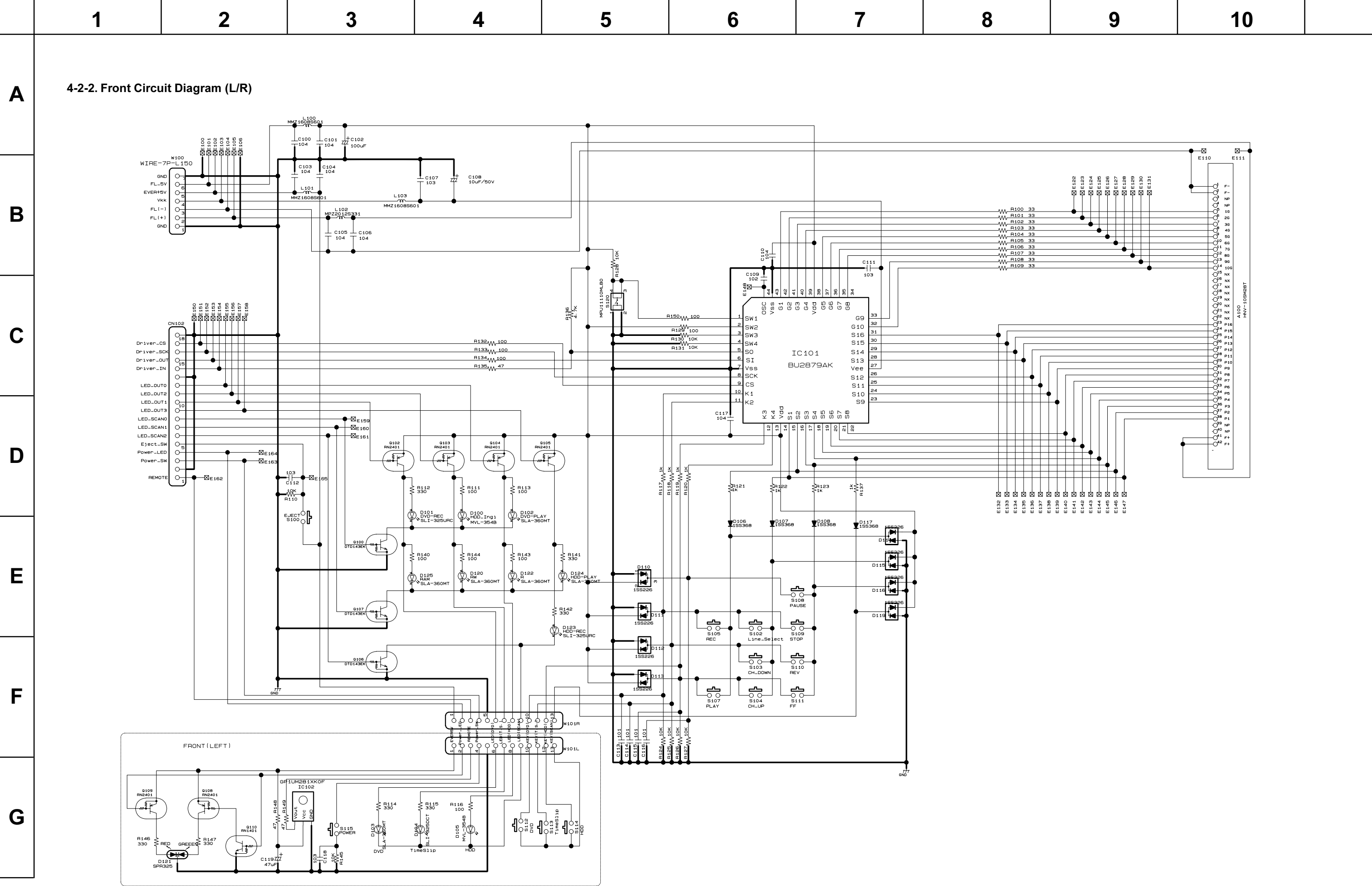
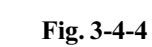


Fig. 3-4-3

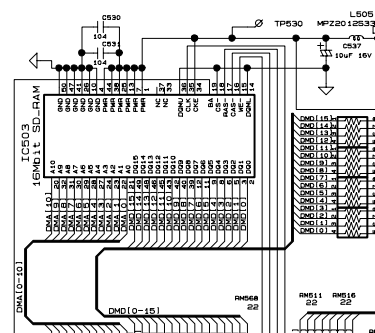
#### 4-3-1. Digital 1 Circuit Diagram

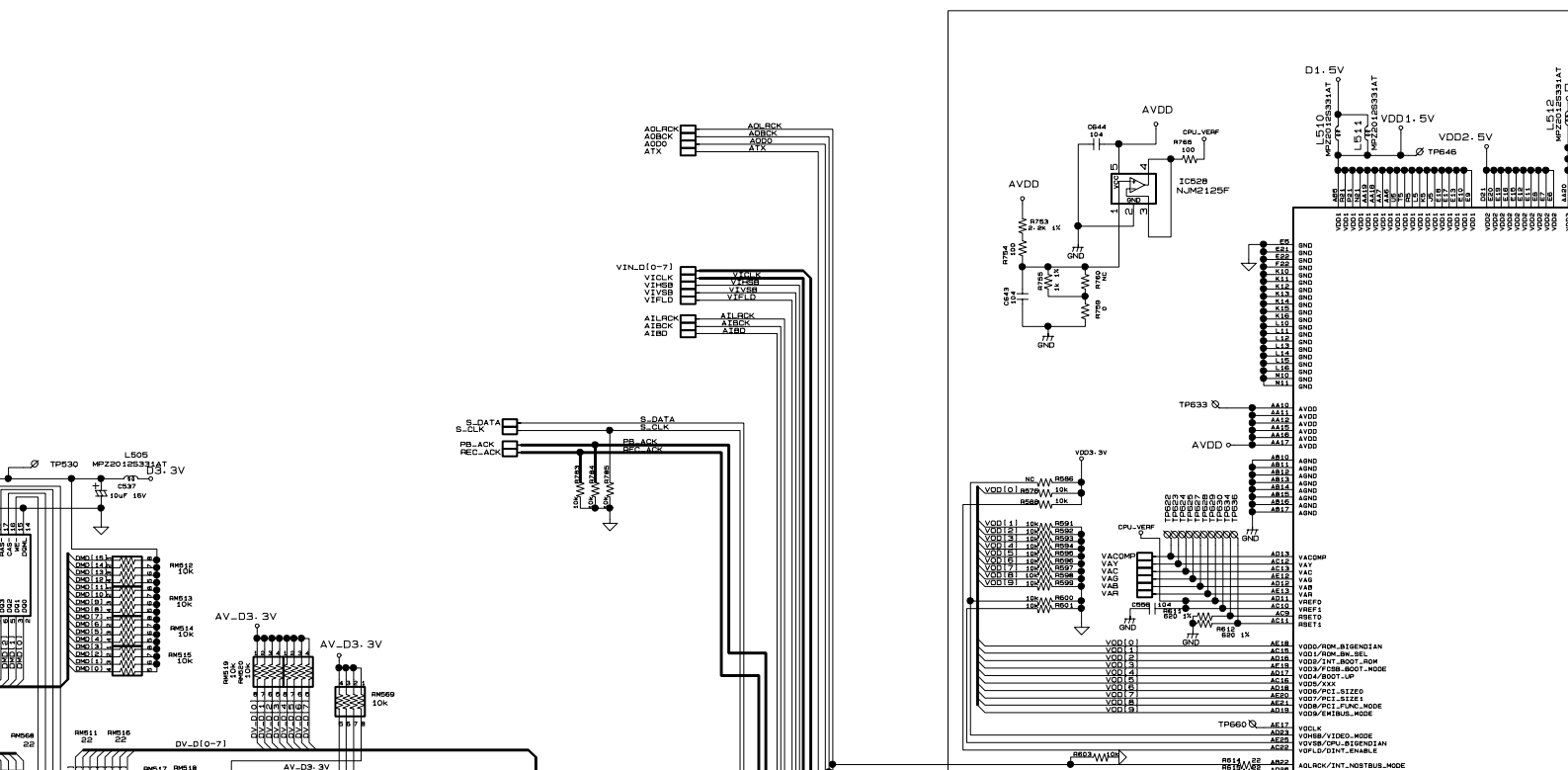


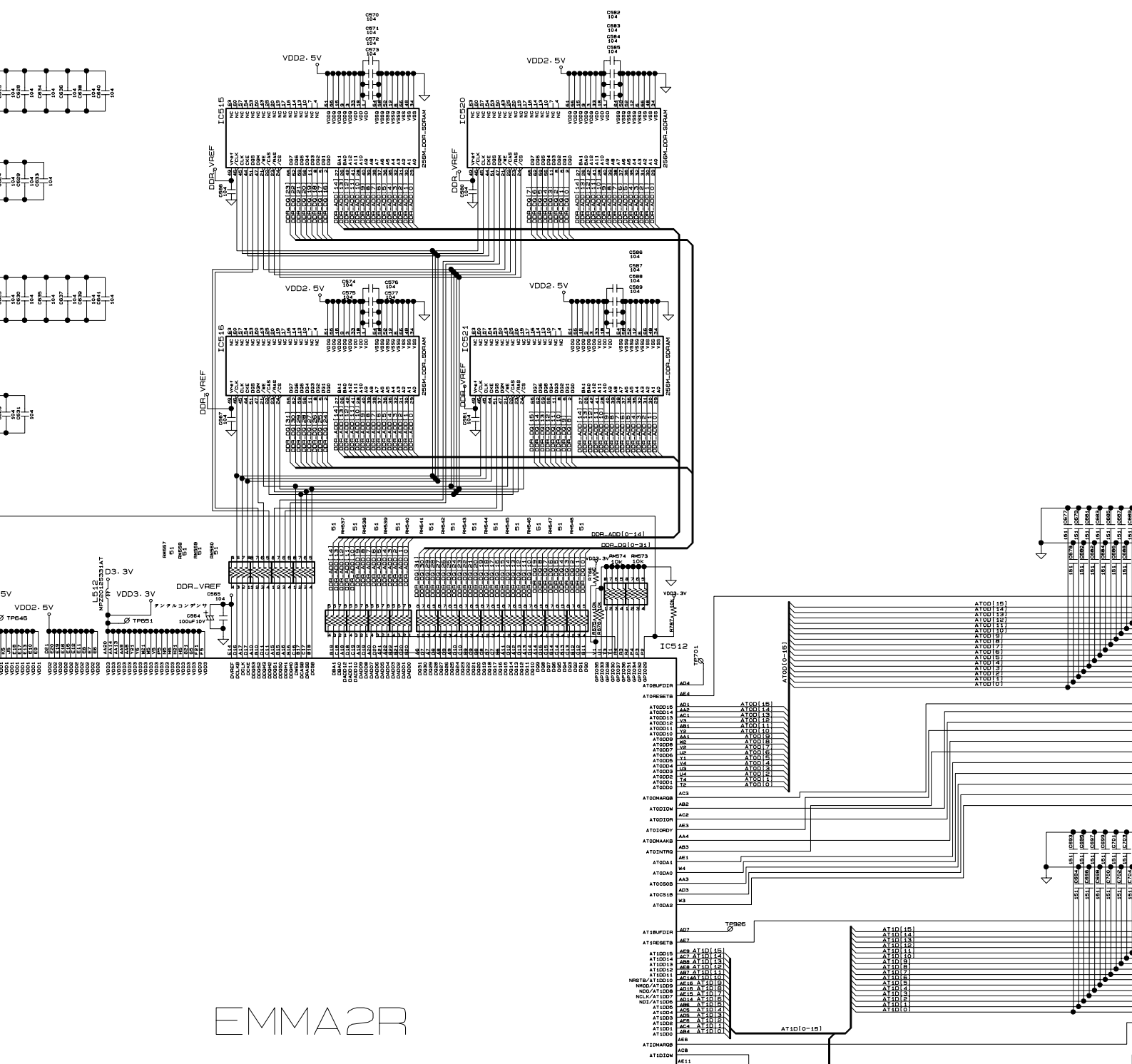
#### 4-3-1. Digital 1 Circuit Diagram

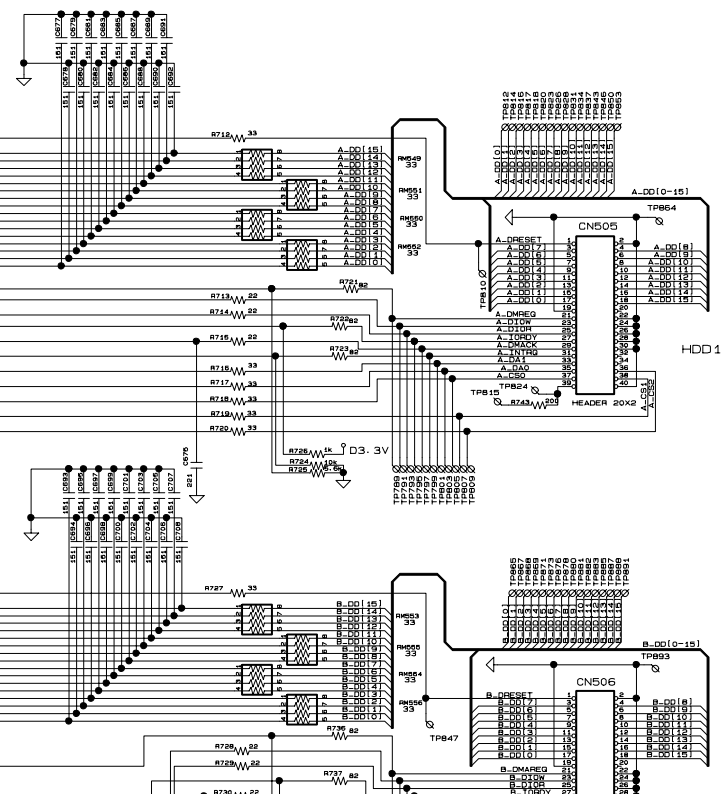
#### 4-3-1. Digital 1 Circuit Diagram

C















UD6 1 17 1F 1



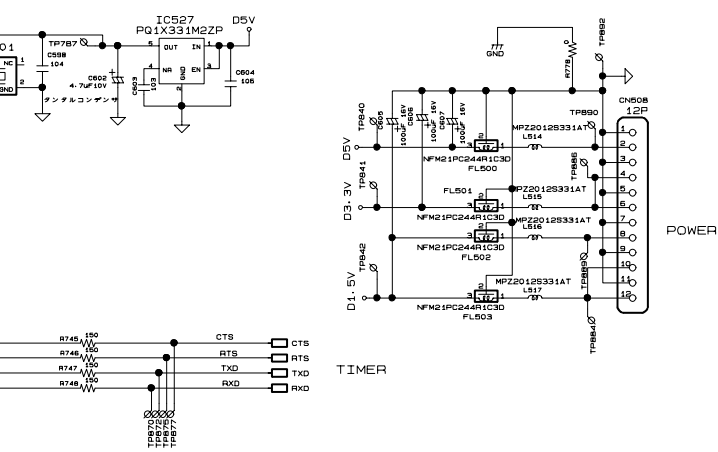
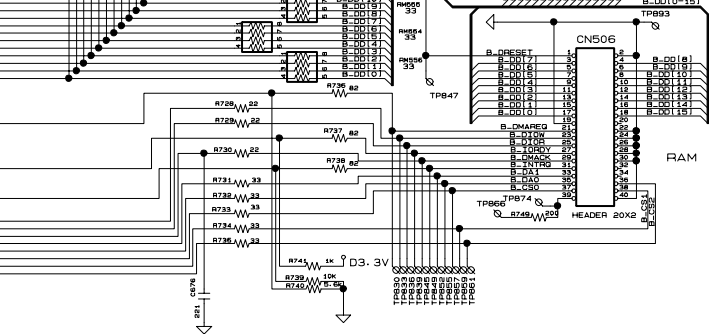


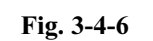
Fig. 3-4-4

# A



**Fig. 3-4-5**

#### 4-4-1. Tuner Circuit Diagram



# 4-4-2. Timer Circuit Diagram

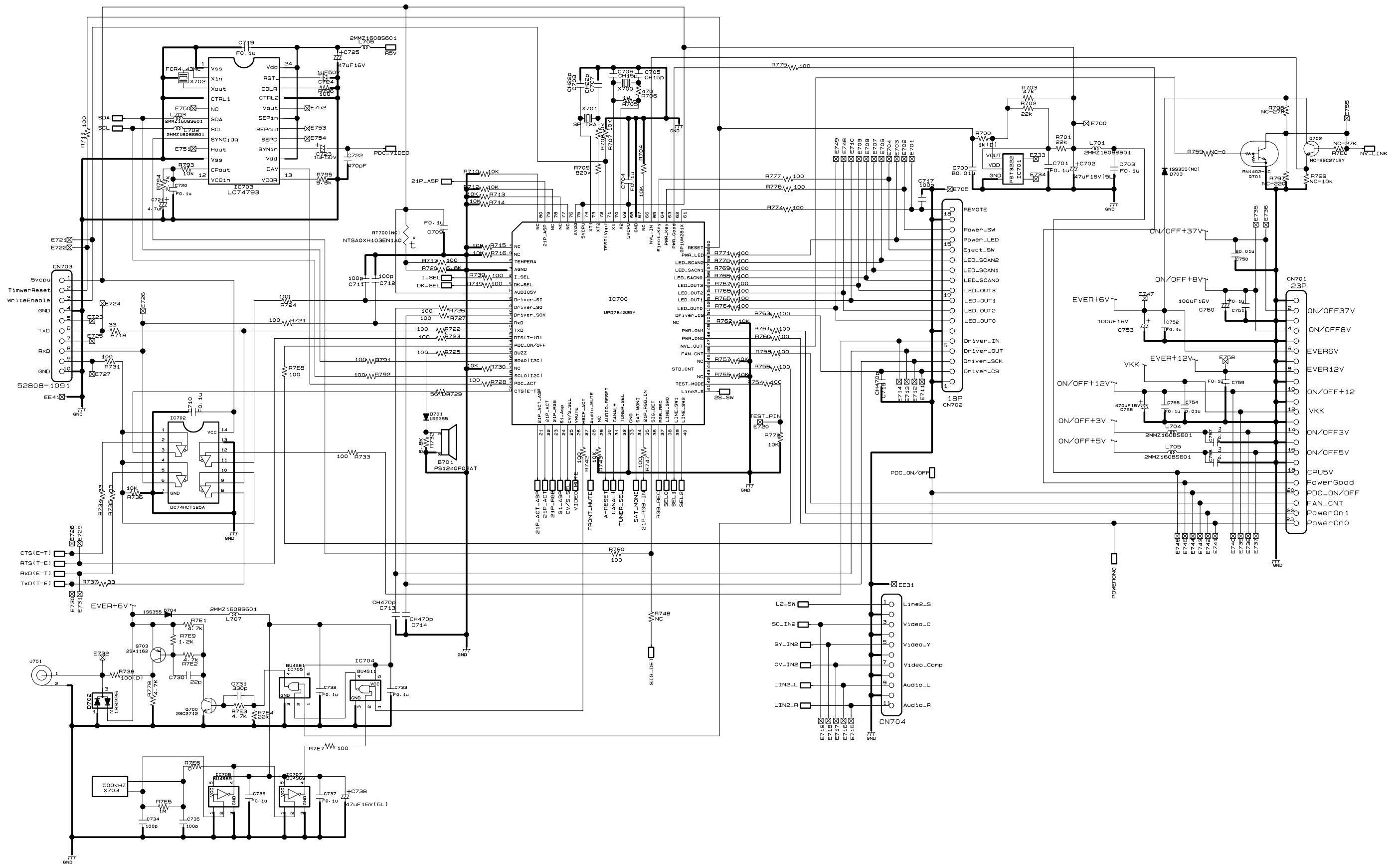


Fig. 3-4-7

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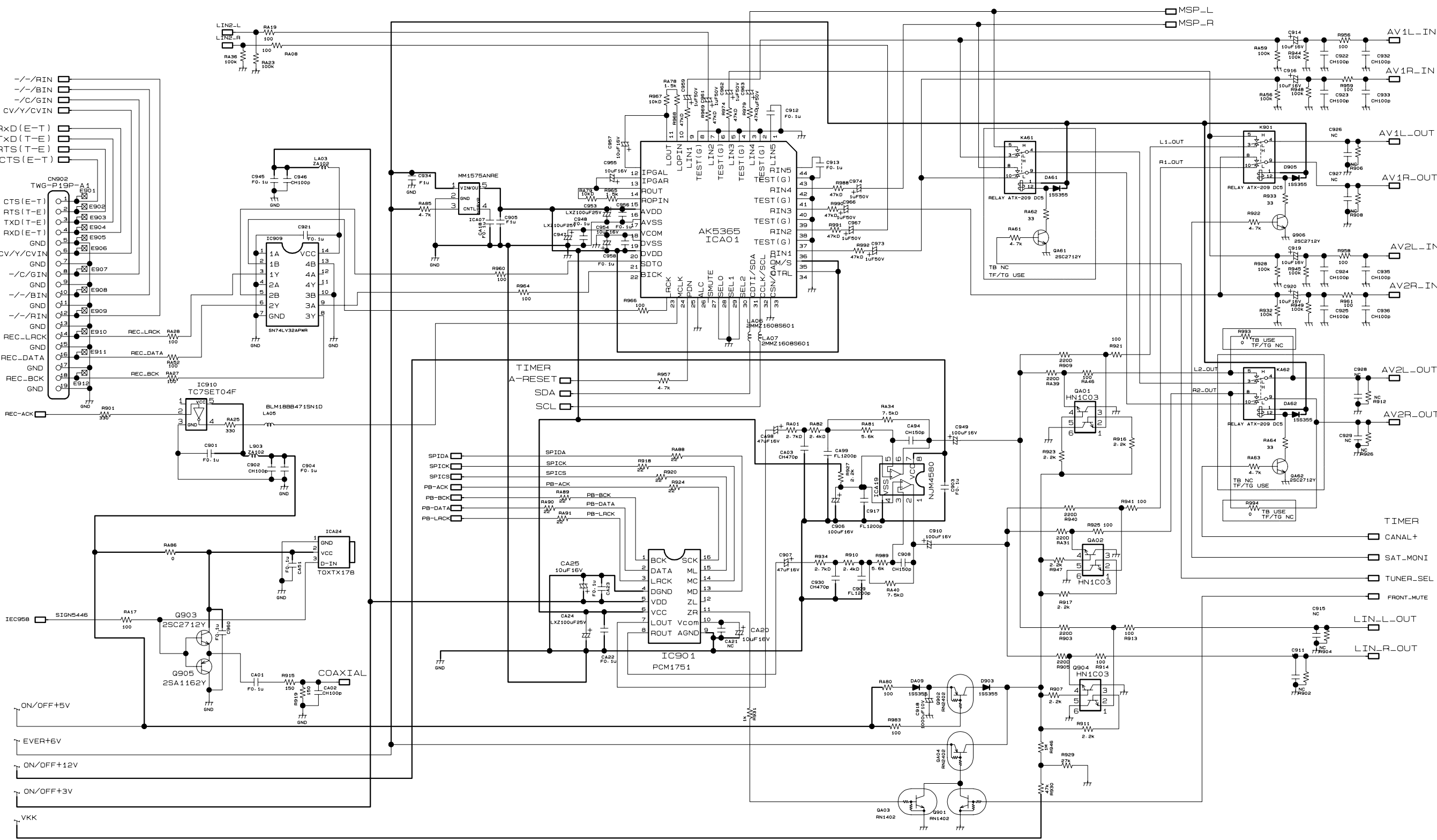
7

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4-4-3. Audio Circuit Diagram



SYMBOL DIFFERENCE LIST

SYMBOL	MODEL	XS32-SB	XS32-SF/SG
KA61 KA62 DA61 DA62 GA61		NC	USE
GA62 RA61 RA62 RA63 RA64		NC	USE
R993 R994		USE	NC

Fig. 3-4-8

1

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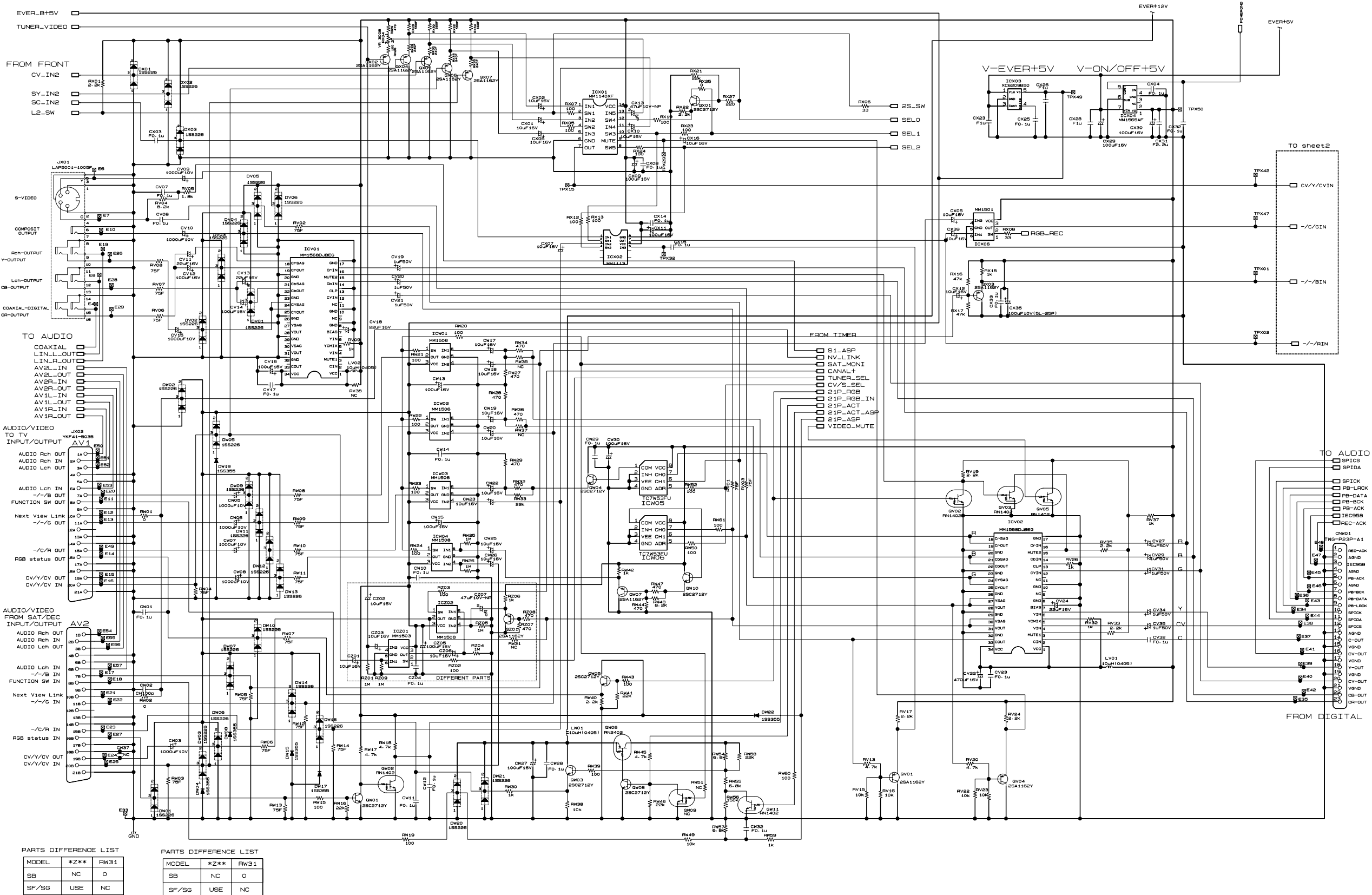
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## 4-4-4. Video Circuit Diagram



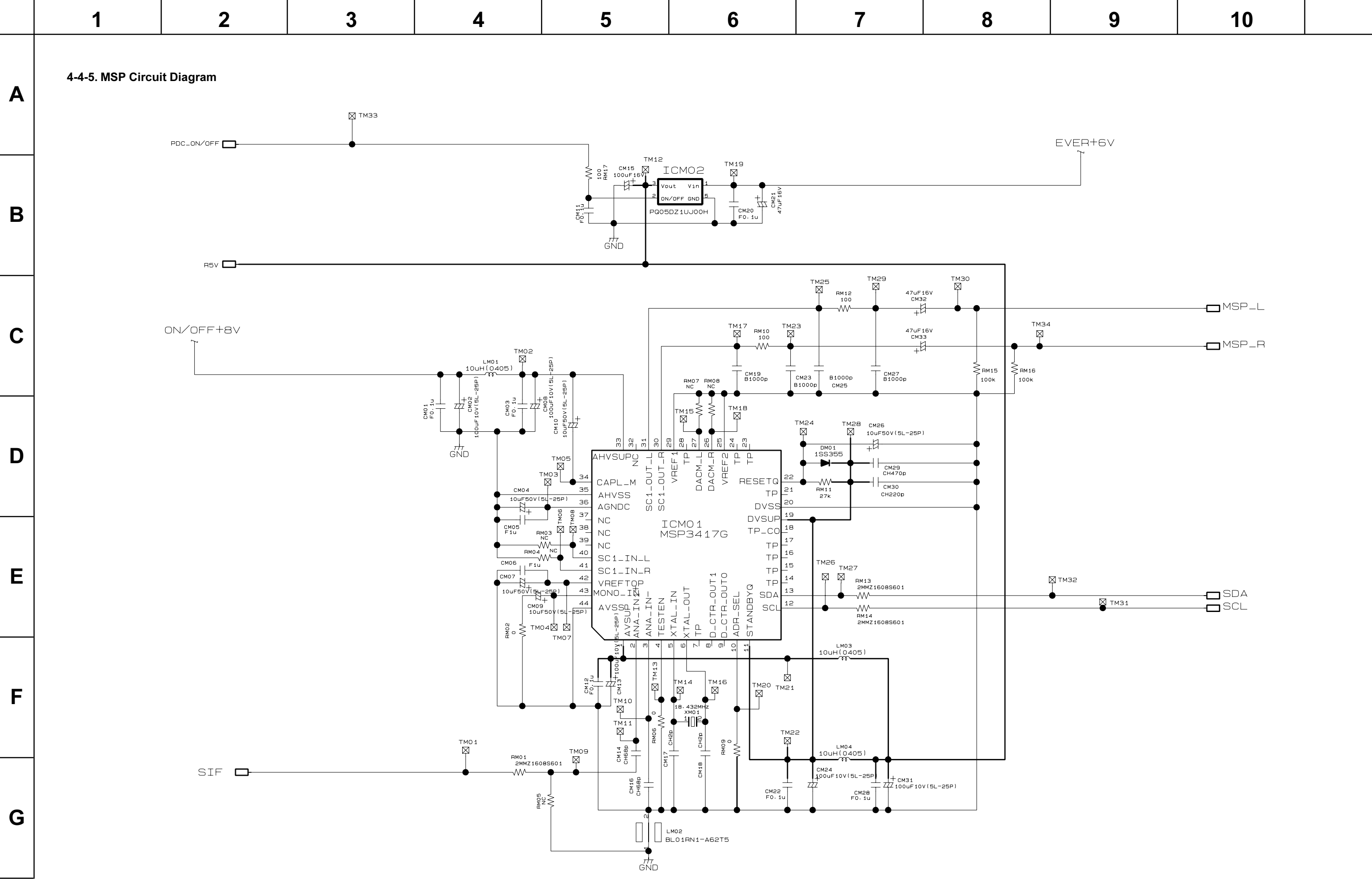


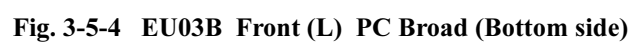
Fig. 3-4-10



## 5-1. Front Jack PC Board



**Fig. 3-5-3 EU03B Front (L) PC Broad (Top side)**



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A

B

C

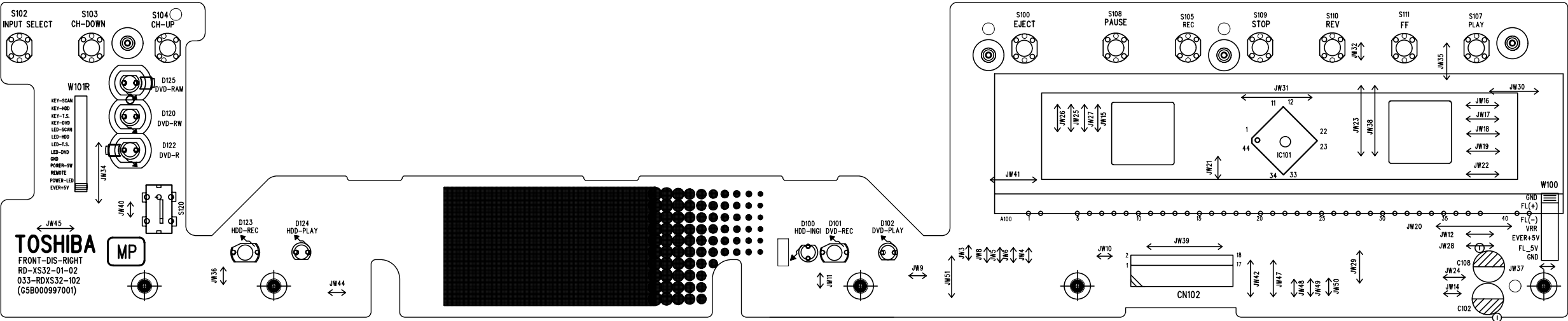
D

E

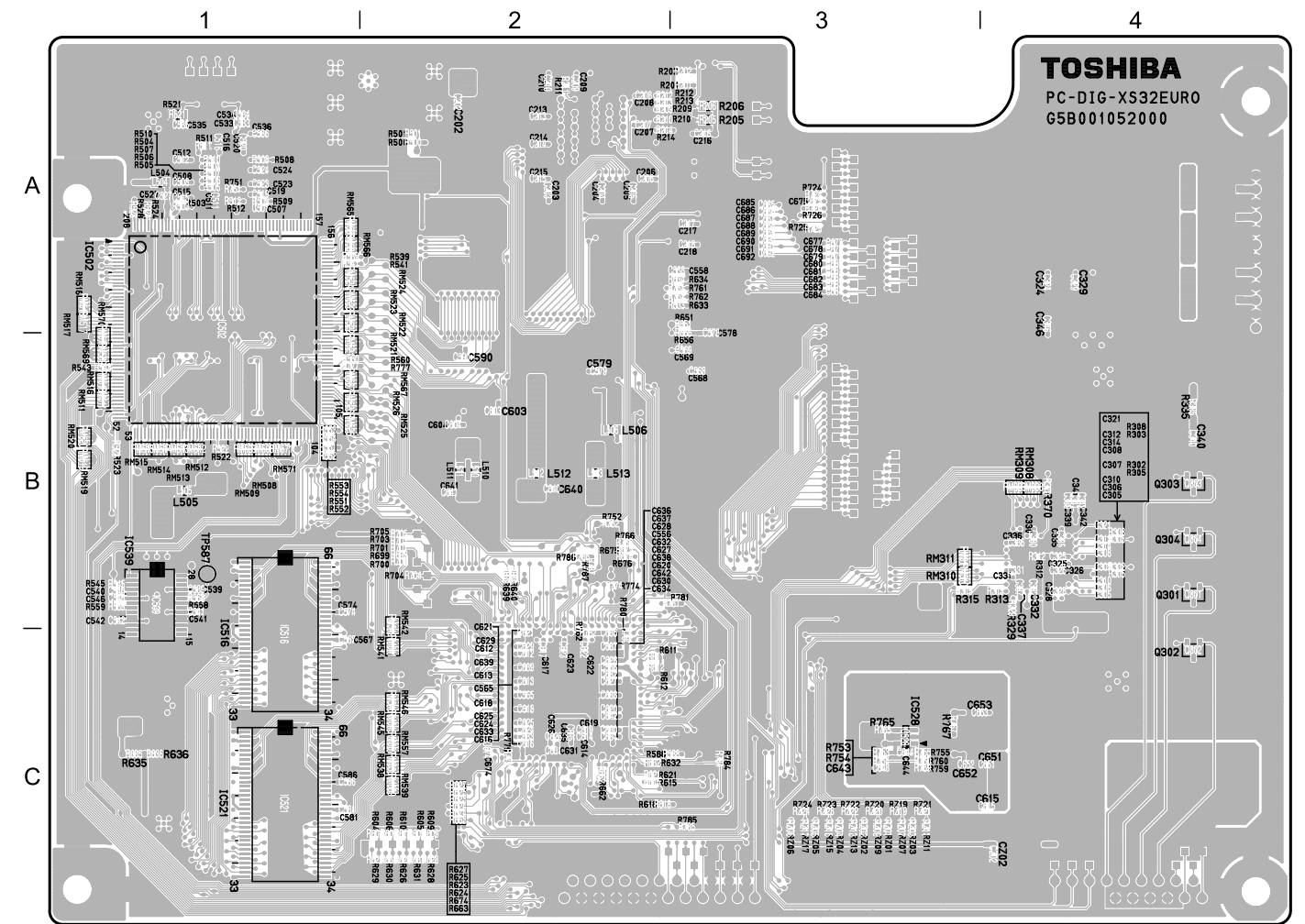
F

G

5-3. Front (R) PC Board



**Fig. 3-5-7 EU01 Digital PC Board (Top side)**



**Fig. 3-5-8 EU01 Digital PC Board (Bottom side)**

5-5. Mother PC Board

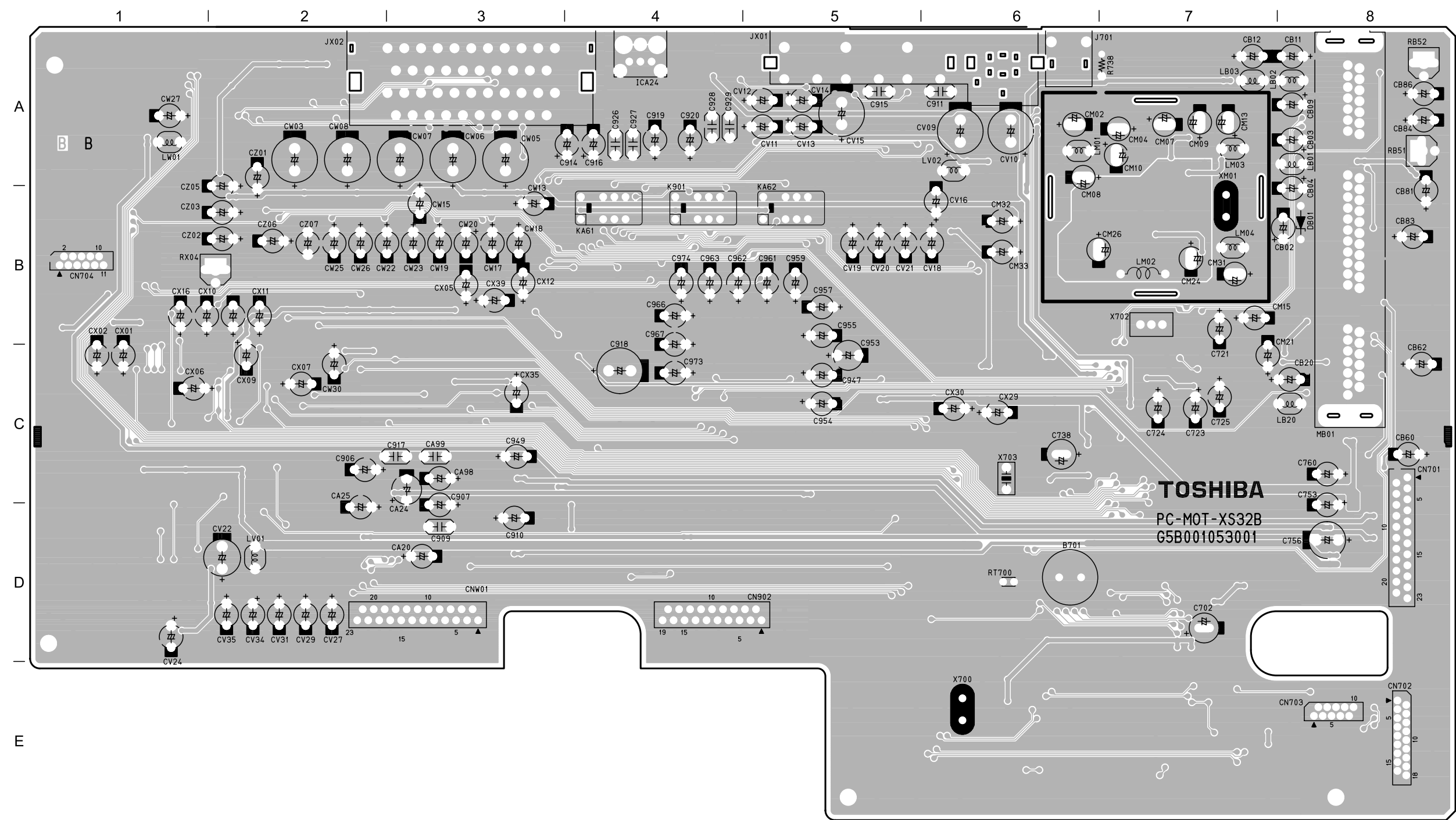


Fig. 3-5-9 EU05 Mother PC Board (Top side)

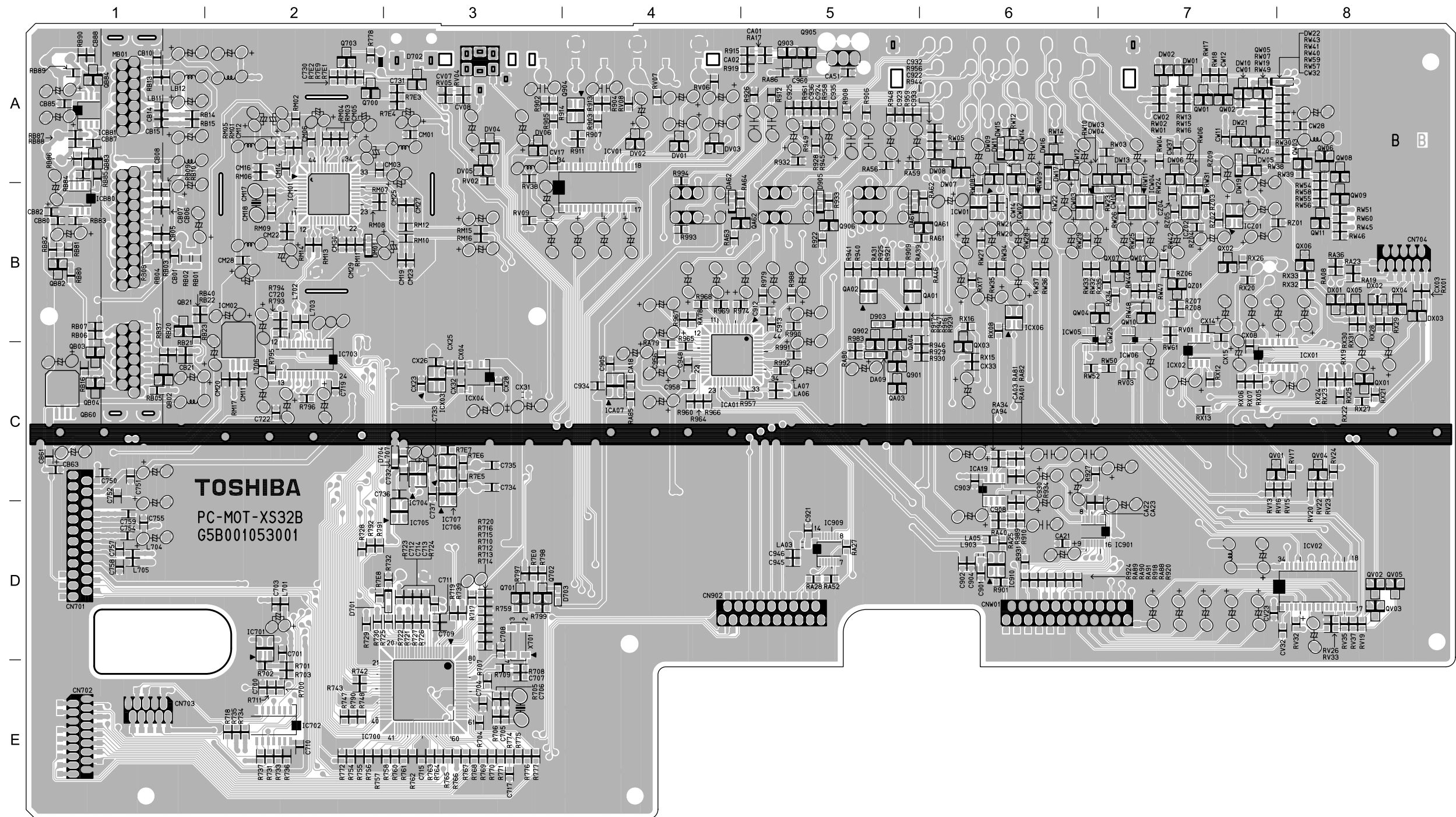


Fig. 3-5-10 EU05 Mother PC Board (Bottom side)

# SECTION 4 PARTS LIST

## SAFETY PRECAUTION

The parts identified by ! (  $\triangle$  ) mark are critical for safety. Replace only with part number specified.

The mounting position of replacement is to be identical with originals.

The substitute replacement parts which do not have the same safety characteristics as specified in the parts list may create shock, fire or other hazards.

## NOTICE

The part number must be used when ordering parts in order to assist in processing, be sure to include the model number and description.

## ABBREVIATIONS

### 1. Integrated Circuit (IC)

### 2. Capacitor (Cap)

- Capacitance Tolerance (for Nominal Capacitance more than 10pF)

Table 4-2-1

Symbol	B	C	D	F	G	J	K	M	N
Tolerance %	$\pm 0.1$	$\pm 0.25$	$\pm 0.5$	$\pm 1$	$\pm 2$	$\pm 5$	$\pm 10$	$\pm 20$	$\pm 30$

Symbol	P	Q	T	U	V	W	X	Y	Z
Tolerance %	+ 100 0	+ 30 - 10	+ 50 - 10	+ 75 - 10	+ 20 - 10	+ 100 - 10	+ 40 - 20	+ 150 - 10	+ 80 - 20

Ex. 10 $\mu$ F J = 10 $\mu$ F  $\pm 5\%$

- Capacitance Tolerance (for Nominal Capacitance 10pF or less)

Table 4-2-2

Symbol	B	C	D	F	G
Tolerance pF	$\pm 0.1$	$\pm 0.25$	$\pm 0.5$	$\pm 1$	$\pm 2$

Ex. 10pF G = 10pF  $\pm 2$ pF

### 3. Resistor (Res)

- Resistance tolerance

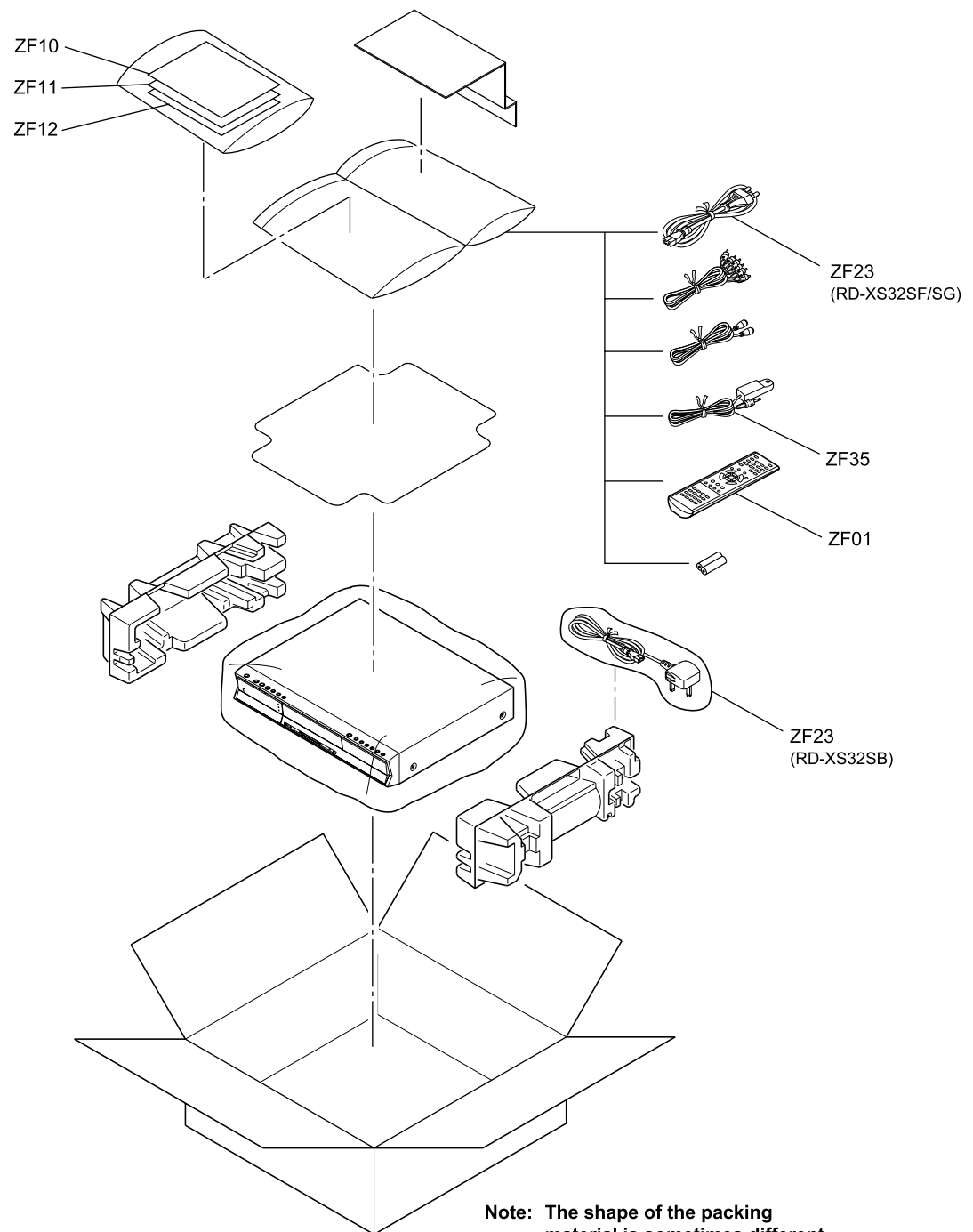
Table 4-3-1

Symbol	B	C	D	F	G	J	K	M
Tolerance %	$\pm 0.1$	$\pm 0.25$	$\pm 0.5$	$\pm 1$	$\pm 2$	$\pm 5$	$\pm 10$	$\pm 20$

Ex. 470 $\Omega$ J = 470 $\Omega$   $\pm 5\%$

## 4. EXPLODED VIEWS

### 4-1. Packing Assembly



**Note:** The shape of the packing material is sometimes different.

**Fig. 4-4-1**

4-2. Chassis Assembly

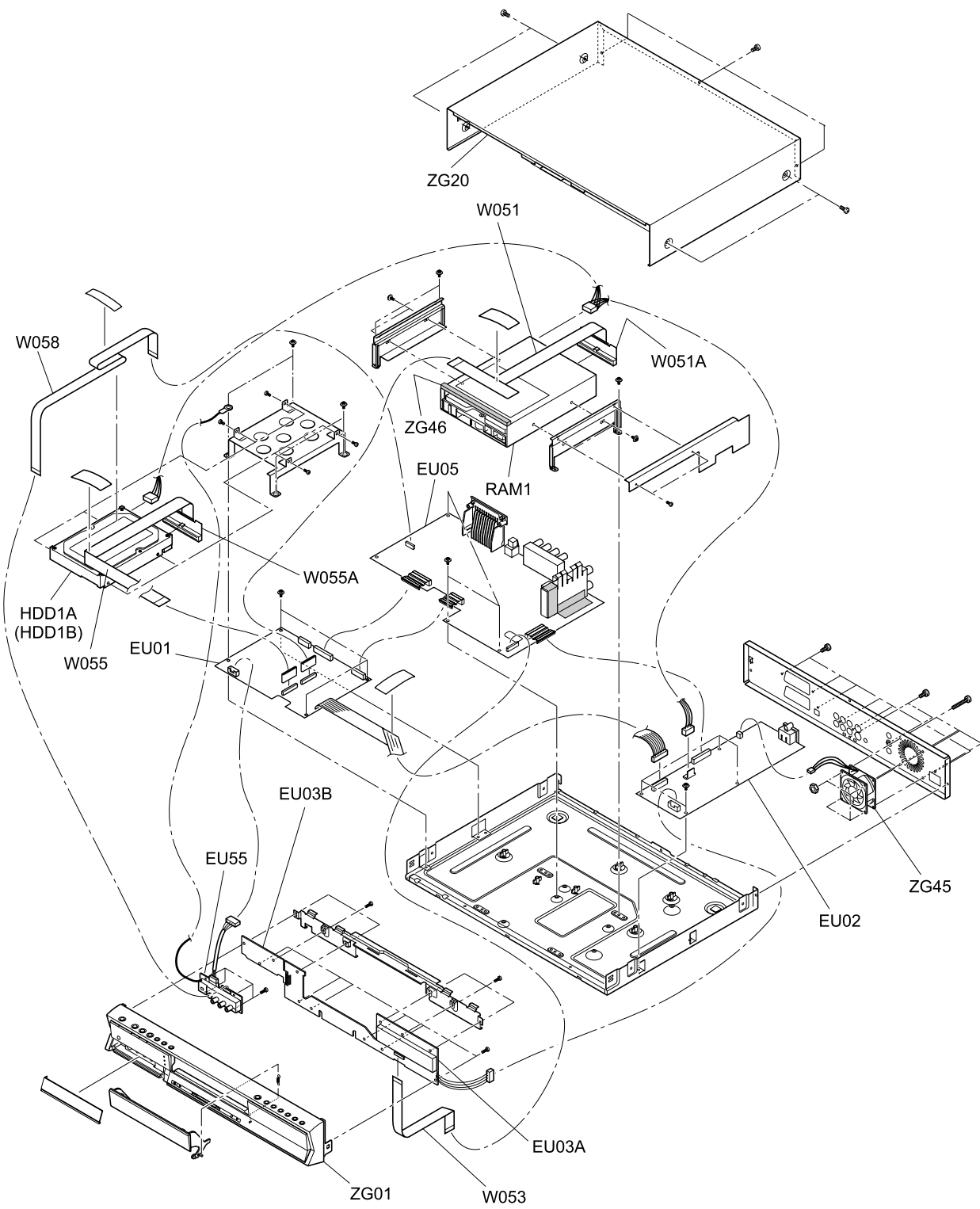


Fig. 4-4-2



5. PARTS LIST

LOCATION PART			
NUMBER	NUMBER	DESCRIPTION	
- MECHANICAL PARTS -			
	HDD1A	P000401240	HDD,ST380012ACE 80GB
	HDD1B	P000401250	HDD,4R080L0 80GB
!	RAM1	P000391340	DVD-RAM SD-W3002-TC
	W051	P000387340	Cable,Flexible FFC,40P,L360
	W051A	P000391300	CONV Unit,ATAPI-FFC
	W053	P000405150	Cable,Flexible FFC,18P,L200
	W055	P000405110	Cable,Flexible FFC,40P,L240
	W055A	P000391300	CONV Unit,ATAPI-FFC
	W058	P000405130	Cable,Flexible, FFC,11P,L360
	ZF01	P000405140	Remote Control Unit,SE-R0132,RD-XS32SB
	ZF01	P000405350	Remote Control Unit,SE-R0133,RD-XS32SF
!	ZF10A	P000403710	Owners Manual,OP-XS32B,English
!	ZF10B	P000403740	Owners Manual,OP-XS32F,English
!	ZF10D	P000403760	Owners Manual,OP-XS32F,French
!	ZF10C	P000403780	Owners Manual,OP-XS32G,English
!	ZF10E	P000403800	Owners Manual,OP-XS32G,French
!	ZF10G	P000403820	Owners Manual,OP-XS32G,Italy
!	ZF10I	P000403840	Owners Manual,OP-XS32G,Spanish
!	ZF10K	P000403860	Owners Manual,OP-XS32G,Germany
!	ZF11A	P000403700	Owners Manual,ST-XS32B,English
!	ZF11B	P000403730	Owners Manual,ST-XS32F,English
!	ZF11D	P000403750	Owners Manual,ST-XS32F,French
!	ZF11C	P000403770	Owners Manual,ST-XS32G,English
!	ZF11E	P000403790	Owners Manual,ST-XS32G,French
!	ZF11G	P000403810	Owners Manual,ST-XS32G,Italy
!	ZF11I	P000403830	Owners Manual,ST-XS32G,Spanish
!	ZF11K	P000403850	Owners Manual,ST-XS32G,Germany
!	ZF12	P000403720	Quick Manual.Q-XS32B,English
!	ZF23	79088034	Power Cord,UK RD-XS32SB
!	ZF23	79088010	Power Cord,UE RD-XS32SF/SG
	ZF35	P000401300	IR-Blaster RWS1000-0052L
	ZG01	P000405100	Front Panel,Silver RD-XS32SB
	ZG01	P000405340	Front Panel,Silver RD-XS32SF/SG
	ZG20	P000387330	Cover,Top
	ZG45	P000401260	Fan,DC 5025LL12SND2
	ZG46	P000405400	Door,Cushion

LOCATION	PART		
NUMBER	NUMBER	DESCRIPTION	
- ELECTRICAL PARTS -			
EU01	P000404980	PC Board Assy	Digital,RD-XS32SB
EU01	P000405360	PC Board Assy	Digital,RD-XS32SF
EU01	P000405380	PC Board Assy	Digital,RD-XS32SG
- INTEGRATED CIRCUITS -			
IC302	P000377900	IC	MM1563DFBE
IC500	P000391280	IC	PQ070XZ01ZPH
IC502	P000405070	IC	UPD72893
IC503	79040163	IC	MT48LC1M16A1TG
IC504	P000391230	IC	UPD72852AGB-8EU
IC510	P000378050	IC	SN74AHC1G04HDCKR
IC513	P000391280	IC	PQ070XZ01ZPH
IC515	P000391210	IC	K4H560838D-TCB000
IC516	P000391210	IC	K4H560838D-TCB000
IC517	P000378040	IC	SN74AHC1G08HDCKR
IC519	79040306	IC	PST594JMT
IC520	P000391210	IC	K4H560838D-TCB000
IC521	P000391210	IC	K4H560838D-TCB000
IC523	P000377920	IC	SN74LV244APWR
IC527	P000391290	IC	PQ1X331M2ZPH
IC528	P000391240	IC	NJM2125F
IC529	P000378050	IC	SN74AHC1G04HDCKR
IC531	P000377900	IC	MM1563DFBE
IC539	P000401220	IC	BU3081FV-E2
- TRANSISTORS -			
Q301	79050016	Transistor,Chip	2SC2712
Q302	79050016	Transistor,Chip	2SC2712
Q303	79050016	Transistor,Chip	2SC2712
Q304	79050016	Transistor,Chip	2SC2712
QZ02	79050018	Transistor,Chip	2SA1162
QZ03	79050018	Transistor,Chip	2SA1162
QZ04	79050018	Transistor,Chip	2SA1162
QZ05	79050018	Transistor,Chip	2SA1162
QZ06	79050018	Transistor,Chip	2SA1162
- DIODES -			
D301	79060019	Diode,Chip	1SS355
- MISCELLANEOUS -			
X301	79089168	Oscillator,Crystal	
X500	79089168	Oscillator,Crystal	
X501	P000377990	Crystal	27.0M
! EU02	P000405120	PC Board Assy	Power
EU03A	P000405160	PC Board Assy	Front(R) Display
- INTEGRATED CIRCUITS -			
IC101	P000377960	IC	BU2879AK
- TRANSISTORS -			
Q100	P000391100	Transistor	DTD143EK
Q102	79050089	Transistor	RN2401
Q103	79050089	Transistor	RN2401
Q104	79050089	Transistor	RN2401
Q105	79050089	Transistor	RN2401
Q106	P000391100	Transistor	DTD143EK
Q107	P000391100	Transistor	DTD143EK
- DIODES -			
D100	79060091	Diode,LED	LED, MVL-354B-T
D101	79060100	Diode,LED	SLI-325URCT31
D102	79060077	Diode,LED	SLA-360MT
D106	79060022	Diode,Chip	1SS368
D107	79060022	Diode,Chip	1SS368
D108	79060022	Diode,Chip	1SS368
D117	79060022	Diode,Chip	1SS368
D120	79060077	Diode,LED	SLA-360MT
D122	79060077	Diode,LED	SLA-360MT
D123	79060100	Diode,LED	SLI-325URCT31
D124	79060077	Diode,LED	SLA-360MT
D125	79060077	Diode,LED	SLA-360MT
- MISCELLANEOUS -			
A100	P000391090	Display FL	HNV-10SM28T
S100	P000391050	Switch,Tact	
S102	P000391050	Switch,Tact	
S103	P000391050	Switch,Tact	
S104	P000391050	Switch,Tact	
S105	P000391050	Switch,Tact	
S107	P000391050	Switch,Tact	
S108	P000391050	Switch,Tact	
S109	P000391050	Switch,Tact	
S110	P000391050	Switch,Tact	
S111	P000391050	Switch,Tact	

LOCATION NUMBER	PART NUMBER	DESCRIPTION	
S120	P000377940	Switch,Push-Lever	
EU03B	P000405170	PC Board Assy	Front(L)
- INTEGRATED CIRCUITS -			
IC102	P000391110	Module,IR	GP1UM281RK
- TRANSISTORS -			
Q108	79050089	Transistor	RN2401
Q109	79050089	Transistor	RN2401
Q110	79050009	Transistor,Chip	RN1401
- DIODES -			
D103	79060077	Diode,LED	SLA-360MT
D104	79060099	Diode,LED	SLI-325DCT31
D105	79060091	Diode,LED	LED, MVL-354B-T
D121	79060033	Diode,LED	
- MISCELLANEOUS -			
S112	P000391050	Switch,Tact	
S113	P000391050	Switch,Tact	
S114	P000391050	Switch,Tact	
S115	P000391050	Switch,Tact	
EU05	P000404990	PC Board Assy	Mother,RD-XS32SB
EU05	P000405370	PC Board Assy	Mother,RD-XS32SF
EU05	P000405390	PC Board Assy	Mother,RD-XS32SG
- INTEGRATED CIRCUITS -			
IC700	79040330	IC	UPD78F4225YGC-8
IC701	P000391180	IC	PST3222NR
IC702	P000391150	IC	DC74HCT125M
IC703	P000395140	IC	LC74793
IC704	P000405040	IC	BU4S11G2-TR
IC705	P000405030	IC	BU4S81G2-TR
IC706	P000405050	IC	BU4S69G2-TR
IC707	P000405050	IC	BU4S69G2-TR
IC901	P000401200	IC	PCM1751DBQR
IC909	P000401170	IC	SN74LV32APWR
IC910	P000391120	IC	TC7SET04F
ICA01	P000377930	IC	AK5365VQ
ICA07	79040397	IC	MM1575ANRE
ICA19	79040044	IC	NJM4580E
ICA24	79089024	Terminal,Optical	TOTX178
ICM01	P000378240	IC	MSP3417G
ICM02	P000395160	IC	PQ05DZ1UJ00H
ICV01	P000391260	IC	MM1568DJBEG
ICV02	P000391260	IC	MM1568DJBEG
ICW01	P000378260	IC	MM1506XNRE
ICW02	P000378260	IC	MM1506XNRE
ICW03	P000378260	IC	MM1506XNRE
ICW04	P000378270	IC	MM1508XNRE
ICW05	P000405020	IC	TC7W53FU
ICW06	P000405020	IC	TC7W53FU
ICX01	79040382	IC	MM1140XFFE
ICX02	79040369	IC	MM1113XFBE
ICX03	P000405080	IC	XC6209
ICX04	P000395150	IC	MM1565AFBE
ICX06	P000377890	IC	MM1501XNRE
- TRANSISTORS -			
Q700	79050016	Transistor,Chip	2SC2712
Q703	79050018	Transistor,Chip	2SA1162
Q901	79050043	Transistor,Chip	RN1402
Q902	79050001	Transistor,Chip	RN2402
Q903	79050016	Transistor,Chip	2SC2712
Q904	79050014	Transistor,Chip	HN1C03F
Q905	79050018	Transistor,Chip	2SA1162
Q906	79050016	Transistor,Chip	2SC2712
QA01	79050014	Transistor,Chip	HN1C03F
QA02	79050014	Transistor,Chip	HN1C03F
QA03	79050043	Transistor,Chip	RN1402
QA04	79050001	Transistor,Chip	RN2402
QB02	79050018	Transistor,Chip	2SA1162
QB04	79050018	Transistor,Chip	2SA1162
QB21	P000395120	Transistor,Chip	2SC2714-Y
QB22	P000395120	Transistor,Chip	2SC2714-Y
QB60	P000395160	IC	PQ05DZ1UJ00H
QV01	79050018	Transistor,Chip	2SA1162
QV02	79050043	Transistor,Chip	RN1402
QV03	79050043	Transistor,Chip	RN1402
QV04	79050018	Transistor,Chip	2SA1162
QV05	79050043	Transistor,Chip	RN1402
QW01	79050016	Transistor,Chip	2SC2712
QW02	79050043	Transistor,Chip	RN1402
QW03	79050016	Transistor,Chip	2SC2712
QW04	79050016	Transistor,Chip	2SC2712
QW05	79050016	Transistor,Chip	2SC2712



# Specification

## RD-XS32SB 1/2

### ■ Power requirement during operation

41W

### ■ Power requirement at standby

3.7W (Eco mode: off)

1.9W (Eco mode: on)

### ■ Power supply

230 - 240V AC, 50/60 Hz

### ■ Mass

4.7kg

### ■ External dimension

Width 430 x Height 78 x Depth 325mm

### ■ Tuner

System: Frequency synthesizer

Channel coverage: PAL I VHF: A-J, 11, 13, E2-E12

UHF: E21-E69

CATV: X, Y, Z, S1-S41, 1-53

(48MHz to 464MHz, 8MHz steps)

Stereo: NICAM-I

### ■ Antenna input/output terminal

VHF/UHF: 75Ω, IEC Connector

### ■ Signal system

Standard PAL Colour TV system

### ■ Laser

Semiconductor laser, Wavelength: 650nm/780nm

### ■ Format

DVD-VR format

DVD-Video format

### ■ Image recording system

MPEG2

### ■ Sound recording system

Dolby Digital M1, M2, Linear PCM

### ■ VIDEO input

1.0Vp-p (75Ω), Sync signal negative,

Pin jack x 1 system, 1 in front

SCART socket x 2 at rear

### ■ VIDEO output

1.0Vp-p (75Ω), Sync signal negative,

Pin jack x 1 system, 1 at rear

SCART socket x 2 at rear

### ■ S-VIDEO input

(Y) 1.0Vp-p (75Ω), Sync signal negative,

(C) 0.286Vp-p (75Ω), 1 in front

Mini DIN4 Pin x 1 system

SCART socket x 1 at rear

### ■ S-VIDEO output

(Y) 1.0Vp-p (75Ω), Sync signal negative,

(C) 0.286Vp-p (75Ω), 1 at rear

Mini DIN4 Pin x 1 system

SCART socket x 1 at rear

### ■ COMPONENT output (Y, P<sub>B</sub>, P<sub>R</sub>)

Y output (green), 1.0Vp-p (75Ω),

Sync signal negative, Pin jack x 1 system

P<sub>B</sub>, P<sub>R</sub> output (blue, red), 0.7Vp-p (75Ω),

Pin jack x 1 system each

### ■ RGB input

(R) 0.7Vp-p (75Ω)

(G) 0.7Vp-p (75Ω)

(B) 0.7Vp-p (75Ω)

SCART socket x 1 at rear (AV2 only)

### ■ RGB output

(R) 0.7Vp-p (75Ω)

(G) 0.7Vp-p (75Ω)

(B) 0.7Vp-p (75Ω)

SCART socket x 1 at rear (AV1 only)

### ■ AUDIO input

2.0V (rms), 50kΩ or below, pin jack

(L, R) x 1 system

1 in front

SCART socket x 2 at rear

### ■ AUDIO output

2.0V (rms), 200Ω or above, pin jack

(L, R) x 1 system

1 at rear

SCART socket x 2 at rear

# RD-XS32SB 2/2

## ■ DIGITAL AUDIO OUTPUT BITSTREAM/PCM (OPTICAL terminal)

Optical connector x 1 system

## ■ DIGITAL AUDIO OUTPUT BITSTREAM/PCM (COAXIAL terminal)

0.5Vp-p (75Ω), pin jack x 1 system

## ■ CHANNEL CHANGE IR jack

This is for connection of the supplied IR control cable only.

## ■ DV input

4-pin x 1 in front

## ■ Remote control

Wireless remote control (SE-R0132)

## ■ Operating conditions

Temperature: 5°C ~ 35°C,  
Position: Horizontal

## ■ Clock display

24 hour digital display

## ■ Clock accuracy

Quartz (monthly deviation: approximately ±30 seconds)

## ■ Supplied Accessories

• Remote control .....	1
• Batteries (R03) .....	2
• Power cord .....	1
• Coaxial cable .....	1
• Video/Audio cable .....	1
• IR control cable .....	1
• OWNER'S MANUAL (INSTALLATION GUIDE) .....	1
• OWNER'S MANUAL (OPERATIONS) .....	1
• Quick Reference .....	1

- The design and specifications may change without prior notice.
- The Illustrations and screens described in this manual may be exaggerated or simplified for easy recognition and may be slightly different from the actual unit.

# Specification

## RD-XS32SF 1/2

### ■ Power requirement during operation

41W

### ■ Power requirement at standby

3.7W (Eco mode: off)

1.9W (Eco mode: on)

### ■ Power supply

230 - 240V AC, 50/60 Hz

### ■ Mass

4.7kg

### ■ External dimension

Width 430 x Height 78 x Depth 325mm

### ■ Tuner

System: Frequency synthesizer

Channel coverage:

SECAM L	VHF: FA, FB, FC1, FC, F1-F6
	UHF: E21-E69
	CATV: B-Q, H1-H21, 1-18, 70-99
PAL B/G	VHF: A-H, E2-E12, M4-M10,
SECAM B/G	R1-R12, U1-U15
	UHF: E21-E69
	CATV: S1-S41, X, Y, Z, Z+1, Z+2
PAL D/K	VHF: A-H, E2-E12, M4-M10,
SECAM D/K	R1-R12, U1-U15
	UHF: E21-E69
	CATV: S1-S41, X, Y, Z, Z+1, Z+2

### ■ Antenna input/output terminal

VHF/UHF: 75Ω, IEC Connector

### ■ Signal system

Standard PAL/SECAM Colour TV system

### ■ Laser

Semiconductor laser, Wavelength: 650nm/780nm

### ■ Format

DVD-VR format

DVD-Video format

### ■ Image recording system

MPEG2

### ■ Sound recording system

Dolby Digital M1, M2, Linear PCM

### ■ VIDEO input

1.0Vp-p (75Ω), Sync signal negative,

Pin jack x 1 system, 1 in front

PERITEL socket x 2 at rear

### ■ VIDEO output

1.0Vp-p (75Ω), Sync signal negative,

Pin jack x 1 system, 1 at rear

PERITEL socket x 2 at rear

### ■ S-VIDEO input

(Y) 1.0Vp-p (75Ω), Sync signal negative,

(C) 0.286Vp-p (75Ω), 1 in front

Mini DIN4 Pin x 1 system

PERITEL socket x 1 at rear

### ■ S-VIDEO output

(Y) 1.0Vp-p (75Ω), Sync signal negative,

(C) 0.286Vp-p (75Ω), 1 at rear

Mini DIN4 Pin x 1 system

PERITEL socket x 1 at rear

### ■ COMPONENT output (Y, P<sub>B</sub>, P<sub>R</sub>)

Y output (green), 1.0Vp-p (75Ω),

Sync signal negative, Pin jack x 1 system

P<sub>B</sub>, P<sub>R</sub> output (blue, red), 0.7Vp-p (75Ω),

Pin jack x 1 system each

### ■ RGB input

(R) 0.7Vp-p (75Ω)

(G) 0.7Vp-p (75Ω)

(B) 0.7Vp-p (75Ω)

PERITEL socket x 1 at rear (AV2 only)

### ■ RGB output

(R) 0.7Vp-p (75Ω)

(G) 0.7Vp-p (75Ω)

(B) 0.7Vp-p (75Ω)

PERITEL socket x 1 at rear (AV1 only)

### ■ AUDIO input

2.0V (rms), 50kΩ or below, pin jack

(L, R) x 1 system

1 in front

PERITEL socket x 2 at rear

### ■ AUDIO output

2.0V (rms), 200Ω or above, pin jack

(L, R) x 1 system

1 at rear

PERITEL socket x 2 at rear

## RD-XS32SF 2/2

### ■ DIGITAL AUDIO OUTPUT BITSTREAM/PCM (OPTICAL terminal)

Optical connector x 1 system

### ■ DIGITAL AUDIO OUTPUT BITSTREAM/PCM (COAXIAL terminal)

0.5Vp-p (75Ω), pin jack x 1 system

### ■ CHANNEL CHANGE IR jack

This is for connection of the supplied IR control cable only.

### ■ DV input

4-pin x 1 in front

### ■ Remote control

Wireless remote control (SE-R0133)

### ■ Operating conditions

Temperature: 5°C ~ 35°C,  
Position: Horizontal

### ■ Clock display

24 hour digital display

### ■ Clock accuracy

Quartz (monthly deviation: approximately ±30 seconds)

### ■ Supplied Accessories

- Remote control ..... 1
- Batteries (R03) ..... 2
- Power cord ..... 1
- Coaxial cable ..... 1
- Video/Audio cable ..... 1
- IR control cable ..... 1
- OWNER'S MANUAL (INSTALLATION GUIDE) ..... 1
- OWNER'S MANUAL (OPERATIONS) ..... 1

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# Specification

## RD-XS32SG 1/2

### ■ Power requirement during operation

41W

### ■ Power requirement at standby

3.7W (Eco mode: off)

1.9W (Eco mode: on)

### ■ Power supply

230 - 240V AC, 50/60 Hz

### ■ Mass

4.7kg

### ■ External dimension

Width 430 x Height 78 x Depth 325mm

### ■ Tuner

System: Frequency synthesizer

Channel coverage:

PAL B/G VHF: A-H, E2-E12, M4-M10,  
SECAM B/G R1-R12, U1-U5, 0-12, 5A, 9A

UHF: E21-E69, 28-69

CATV: S1-S41, X, Y, Z, Z+1, Z+2

PAL D/K VHF: A-H, E2-E12, M4-M10,  
SECAM D/K R1-R12, U1-U15

UHF: E21-E69

CATV: S1-S41, X, Y, Z, Z+1, Z+2

SECAM L VHF: FB, FC1, FC, F1-F6

UHF: E21-E69

CATV: B-Q, H1-H21, 1-18, 70-99

### ■ Antenna input/output terminal

VHF/UHF: 75Ω, IEC Connector

### ■ Signal system

Standard PAL/SECAM Colour TV system

### ■ Laser

Semiconductor laser, Wavelength: 650nm/780nm

### ■ Format

DVD-VR format

DVD-Video format

### ■ Image recording system

MPEG2

### ■ Sound recording system

Dolby Digital M1, M2, Linear PCM

### ■ VIDEO input

1.0Vp-p (75Ω), Sync signal negative,

Pin jack x 1 system, 1 in front

SCART socket x 2 at rear

### ■ VIDEO output

1.0Vp-p (75Ω), Sync signal negative,

Pin jack x 1 system, 1 at rear

SCART socket x 2 at rear

### ■ S-VIDEO input

(Y) 1.0Vp-p (75Ω), Sync signal negative,

(C) 0.286Vp-p (75Ω), 1 in front

Mini DIN4 Pin x 1 system

SCART socket x 1 at rear (AV2 only)

### ■ S-VIDEO output

(Y) 1.0Vp-p (75Ω), Sync signal negative,

(C) 0.286Vp-p (75Ω), 1 at rear

Mini DIN4 Pin x 1 system

SCART socket x 1 at rear (AV1 only)

### ■ COMPONENT output (Y, P<sub>B</sub>, P<sub>R</sub>)

Y output (green), 1.0Vp-p (75Ω),

Sync signal negative, Pin jack x 1 system

P<sub>B</sub>, P<sub>R</sub> output (blue, red), 0.7Vp-p (75Ω),

Pin jack x 1 system each

### ■ RGB input

(R) 0.7Vp-p (75Ω)

(G) 0.7Vp-p (75Ω)

(B) 0.7Vp-p (75Ω)

SCART socket x 1 at rear (AV2 only)

### ■ RGB output

(R) 0.7Vp-p (75Ω)

(G) 0.7Vp-p (75Ω)

(B) 0.7Vp-p (75Ω)

SCART socket x 1 at rear (AV1 only)

### ■ AUDIO input

2.0V (rms), 50kΩ or below, pin jack

(L, R) x 1 system

1 in front

SCART socket x 2 at rear

### ■ AUDIO output

2.0V (rms), 200Ω or above, pin jack

(L, R) x 1 system

1 at rear

SCART socket x 2 at rear



# RD-XS32SG 2/2

■ **DIGITAL AUDIO OUTPUT**  
**BITSTREAM/PCM (OPTICAL terminal)**

Optical connector x 1 system

■ **DIGITAL AUDIO OUTPUT**  
**BITSTREAM/PCM (COAXIAL terminal)**

0.5Vp-p (75Ω), pin jack x 1 system

■ **CHANNEL CHANGE IR jack**

This is for connection of the supplied IR control cable only.

■ **DV input**

4-pin x 1 in front

■ **Remote control**

Wireless remote control (SE-R0133)

■ **Operating conditions**

Temperature: 5°C ~ 35°C,  
Position: Horizontal

■ **Clock display**

24 hour digital display

■ **Clock accuracy**

Quartz (monthly deviation: approximately ±30 seconds)

■ **Supplied Accessories**

- Remote control ..... 1
- Batteries (R03) ..... 2
- Power cord ..... 1
- Coaxial cable ..... 1
- Video/Audio cable ..... 1
- IR control cable ..... 1
- OWNER'S MANUAL (INSTALLATION GUIDE) ..... 1
- OWNER'S MANUAL (OPERATIONS) ..... 1

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**TOSHIBA CORPORATION**

1-1, SHIBAURA 1-CHOME, MINATO-KU, TOKYO 105-8001, JAPAN